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**AN IMPACT ANALYSIS
CLEAR CREEK PLANNING UNIT
GIFFORD PINCHOT NATIONAL FOREST**



FINAL ENVIRONMENTAL STATEMENT



FOREST SERVICE - USDA
PACIFIC NORTHWEST REGION
FINAL ENVIRONMENTAL STATEMENT
CLEAR CREEK PLANNING UNIT LAND-USE PLAN
USDA-FS-R6-FES(Adm)-75-08

PREPARED IN ACCORDANCE WITH SECTION 102(2)(C) OF PL 91-190
THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

SUMMARY SHEET

I.	<u>Final Environmental Statement.</u>	<u>Responsible Official For Forest Service Land</u>
II.	<u>Forest Service.</u>	Robert D. Tokarczyk Forest Supervisor
III.	<u>This is an Administrative Action.</u>	Gifford Pinchot National Forest 500 West 12th Street Vancouver, Washington 98660
IV.	<u>Brief Description of Action.</u>	

The Supervisor of the Gifford Pinchot National Forest proposes to implement a comprehensive management plan for the Clear Creek Planning Unit. This Planning Unit lies in Skamania County in the State of Washington and covers 76,520 acres of land, of which 1,900 acres are in private ownership.

The proposed management plan provides for almost every resource use, except Wilderness and domestic range. An area of 3,020 acres would be recommended for formal classification under 36 CFR 294.1 as part of the Shark Rock Scenic Area. Forty-five miles of Class I and II streams would be protected. Two areas totaling 6,360 acres would be managed in an Unroaded status, primarily for dispersed-unroaded recreation. Timber harvest in one Unroaded area is not planned but would be allowed to salvage catastrophic timber losses. Within the other 1,720 acre Unroaded area, timber harvest would be planned to remove dead and dying trees. An area of 9,620 acres would be managed as Key Wildlife Habitat. Developed Recreation sites would total 30 acres.

The Planning Unit includes all or portions of four Roadless and Undeveloped Areas as inventoried in the Roadless Area Review. None of these Areas are recommended for Wilderness Study. However, no management activities would take place which would remove RARE Areas No. 304, 308, 309, or 344 from Wilderness consideration until decisions are made for the adjacent Roadless Areas outside the Clear Creek Planning Unit.

Timber Management areas total 52,780 acres. These would be managed for a variety of uses including developed and dispersed roaded recreation, timber harvest, watershed, and wildlife.

V. Summary of Environmental Impacts and Adverse Environmental Effects

The Proposed Action would reduce the currently programmed timber harvest by 4.4 MM Bd. Ft. to 24.2 MM Bd. Ft./year. Potential benefits from all types of recreation would increase 36,000 visitor days to 242,000 visitor days/year.

It is anticipated that this plan would cause a negligible change in social and economic characteristics at the local, regional, and national levels.

Additional people using the area would cause minor physical and biological impacts. Logging and roads would have the potential to cause soil compaction and disturbance, some water quality degradation, and interference with natural biological systems.

Refer to graphs of Cumulative Effects of land use planning on page iii.

VI. List of Alternatives Considered.

1. A mixture of Resource Uses (The Proposed Action).
2. Nonintensive management with focus on Wilderness and recreation.
3. A mixture of resource uses with more emphasis on commodity production than Alternative No. 1.
4. A maximization of the production of tangible commodities, specifically wood fiber.
5. Present management plan.

VII. Federal, State, and Local agencies and other sources from which written comments have been received on the Draft Environmental Statement.

Federal Agencies:

Agricultural Research Service
Army Corps of Engineers
Bonneville Power Administration
Department of Housing and Urban Development
Department of the Interior
Environmental Protection Agency
Federal Power Commission
Soil Conservation Service

State Agencies:

Washington State Department of Game
Washington State Department of Fisheries

County Agencies:

Lewis County Commissioners
Skamania County Board of Commissioners

Organizations and Industry:

Burlington Northern Railway
Gifford Pinchot Study Group
Industrial Forestry Association
Mazamas
Northwest Chapter — Sierra Club
Oregon Environmental Council
Sierra Club, Office of the Northwest Representative
The Wilderness Society
Western Forestry and Conservation Association

Individuals:

Ellis and Fay Ogilvie
Michael L. Collier
Ira Spring
Thomas Horobik
John Frewing
Karl W. Jansen
Vasco J. Fenili
Harry E. Wilson
Harris Dusenberry
M. E. Opp
John Allinger
Eleanor Heller
Bob Powne
Charles C. Raines
Craig Weaver

VIII. Date Draft Environmental Statement made available to Council on Environmental Quality and the Public: January 29, 1975

Date this Statement made available to Council on Environmental Quality and the Public:

IX. Cumulative Effects

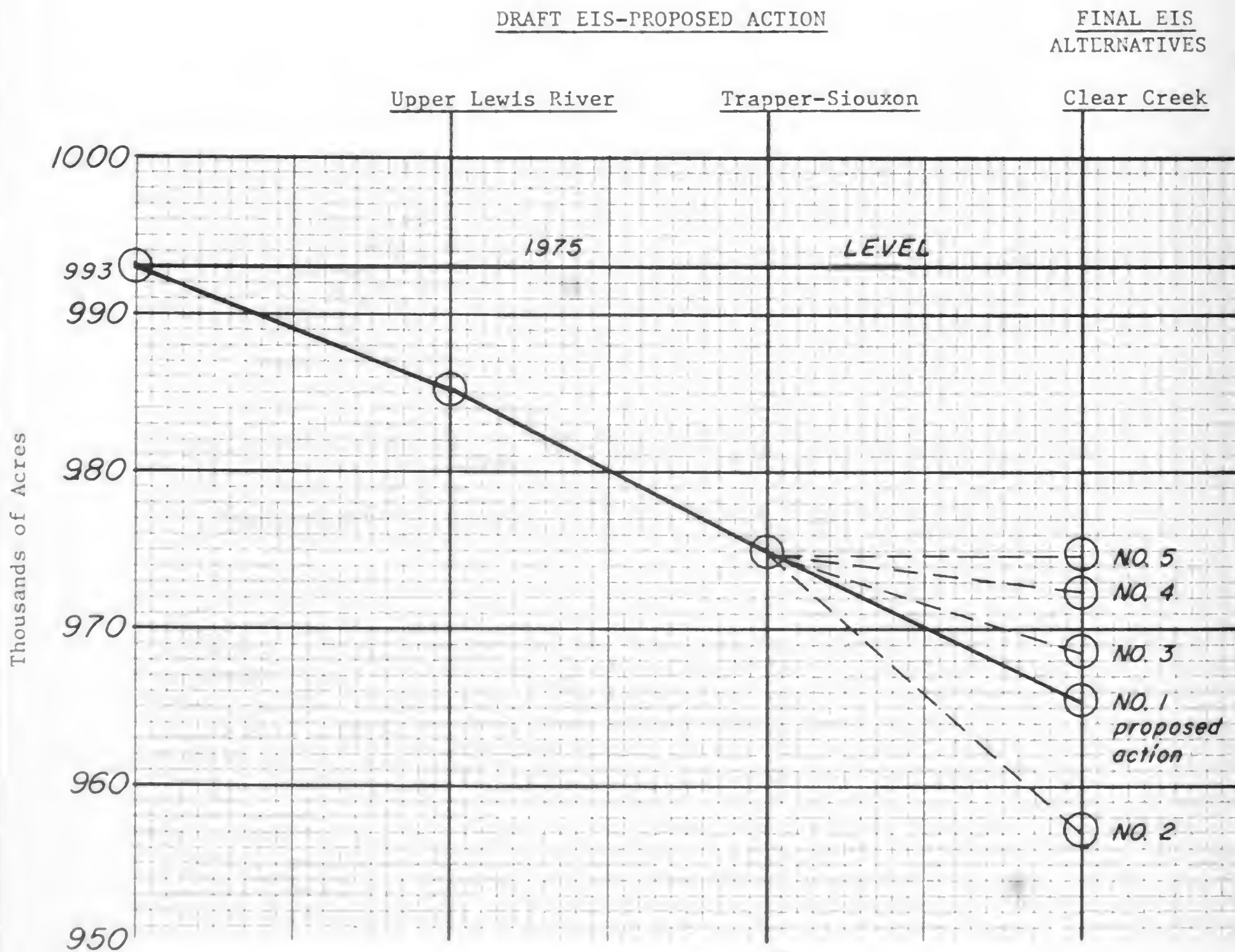
The following graphs illustrate the cumulative effects of proposed land allocations to date made through land use planning. These are changes to the present management plans made prior to 1970. In the case of Programmed Timber Harvest and Timber Management Area the changes refer to the current Timber Management Plan for the Gifford Pinchot National Forest, approved in May, 1975.

The levels of management shown for the Upper Lewis River and Trapper/Siouxon Planning Units are based upon the Proposed Action in the Draft Environmental Statements filed previously for those Planning Units. No final decisions concerning land allocations have been made for either of those Planning Units.

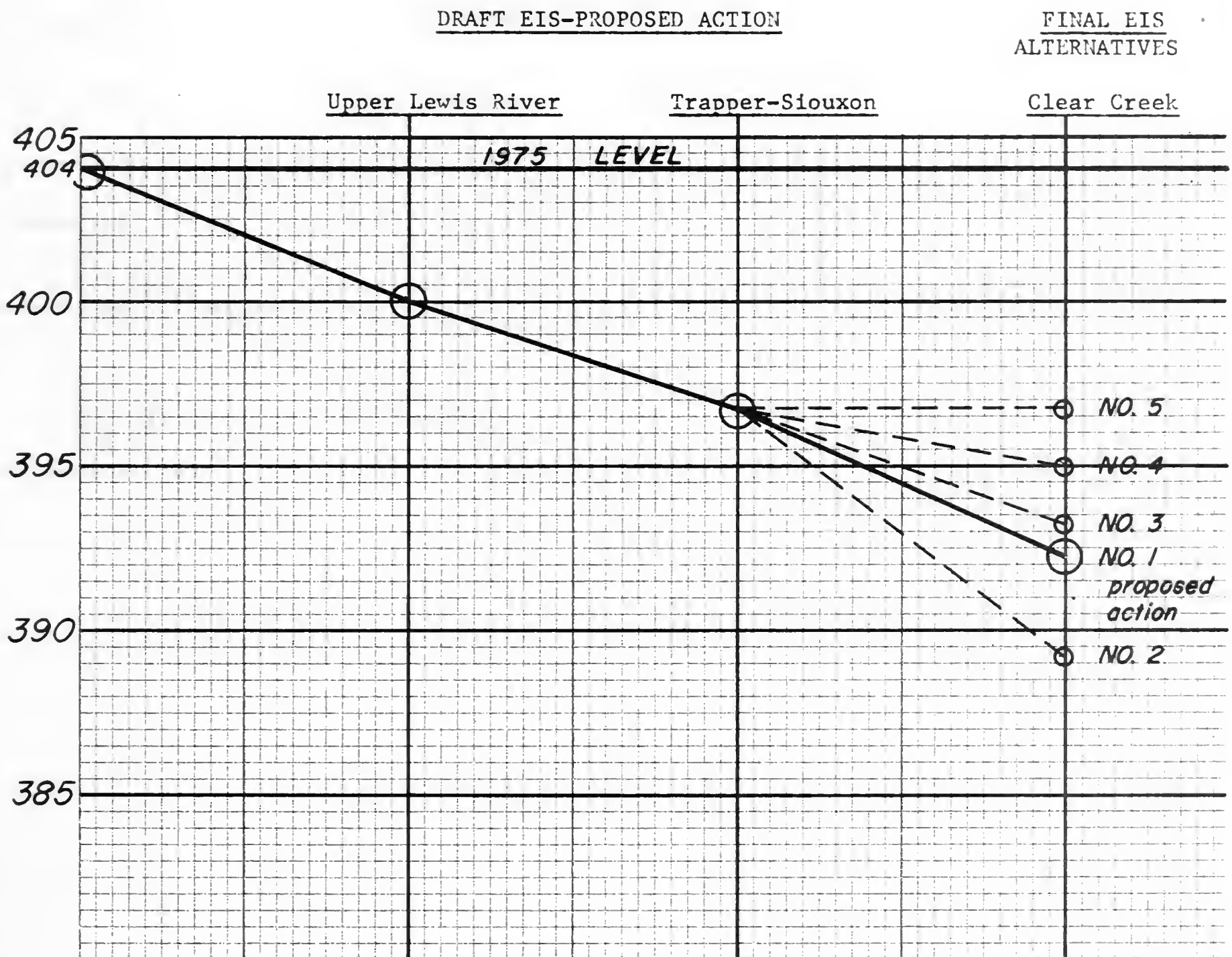
TIMBER MANAGEMENT AREA

CUMULATIVE EFFECT OF LAND USE PLANNING

INCLUDES:
STANDARD, SPECIAL, MARGINAL LAND CLASSES



PROGRAMMED TIMBER HARVEST
CUMULATIVE EFFECT OF LAND USE PLANNING



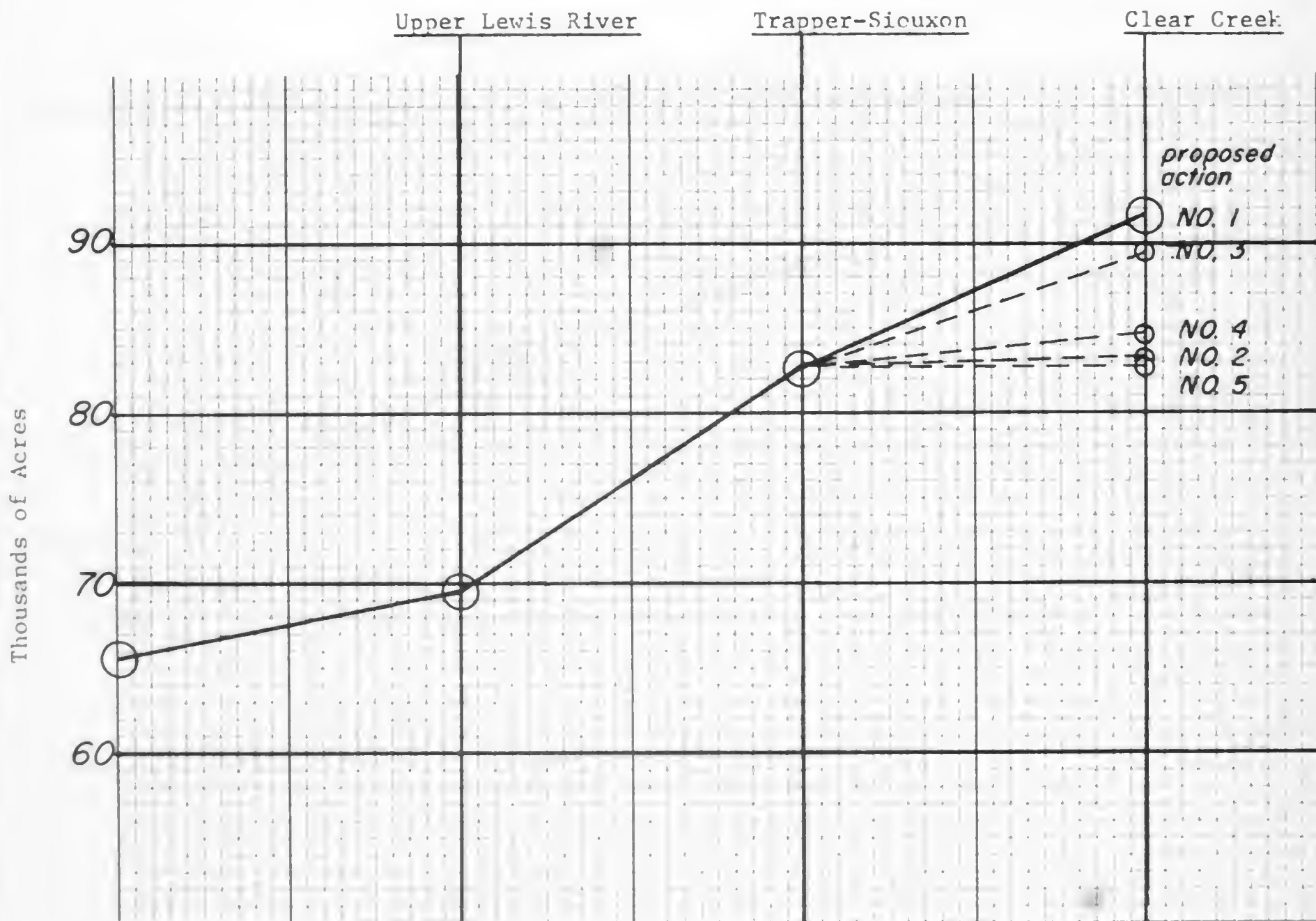
RECREATION MANAGEMENT AREA

CUMULATIVE EFFECT OF LAND USE PLANNING

INCLUDES
UNROADED AREA, SPECIAL INTEREST AREAS, DEVELOPED RECREATION

DRAFT EIS-PROPOSED ACTION

FINAL EIS
ALTERNATIVES



WILDERNESS STUDY AREA

CUMULATIVE EFFECT OF LAND USE PLANNING

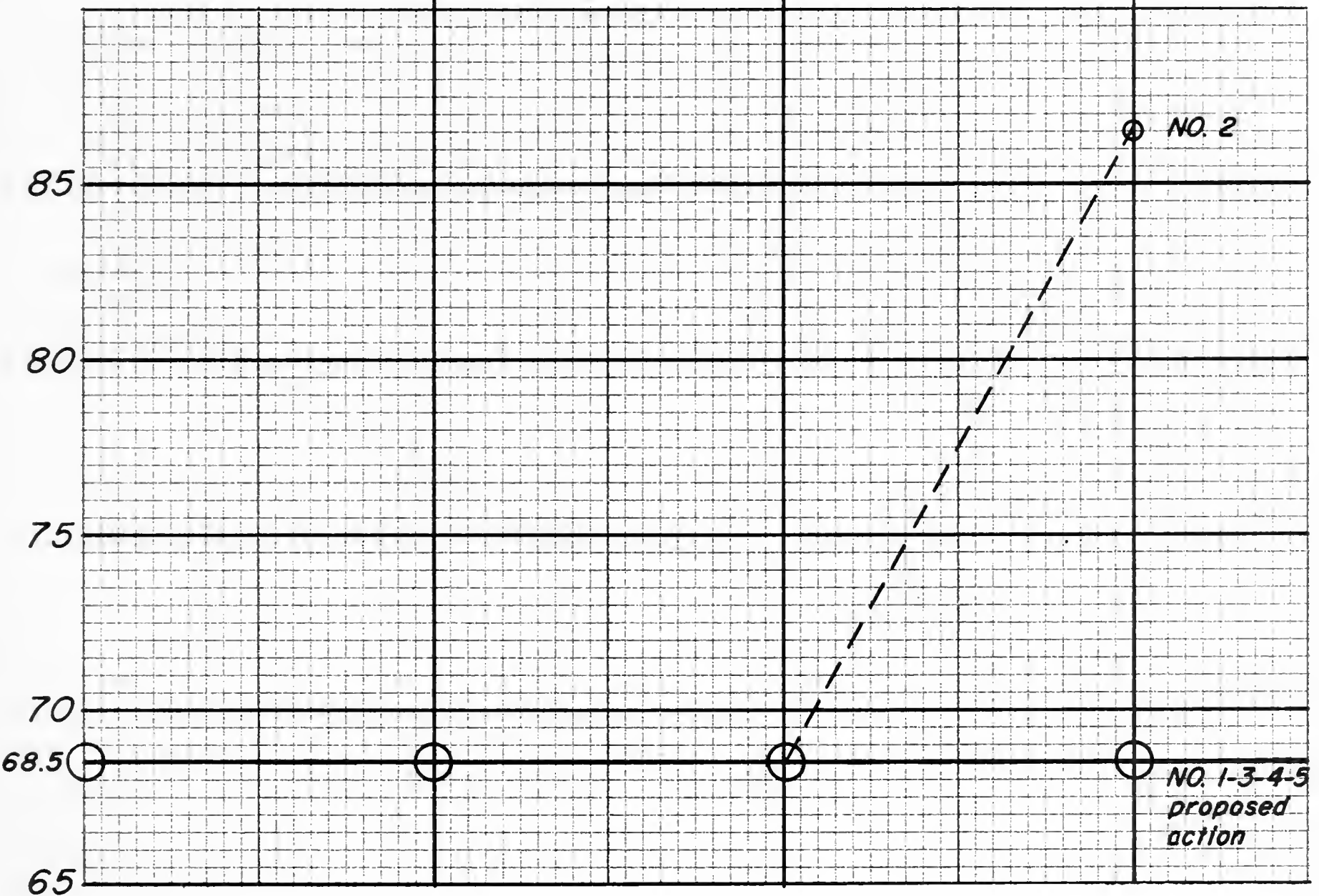
DRAFT EIS-PROPOSED ACTION

FINAL EIS
ALTERNATIVES

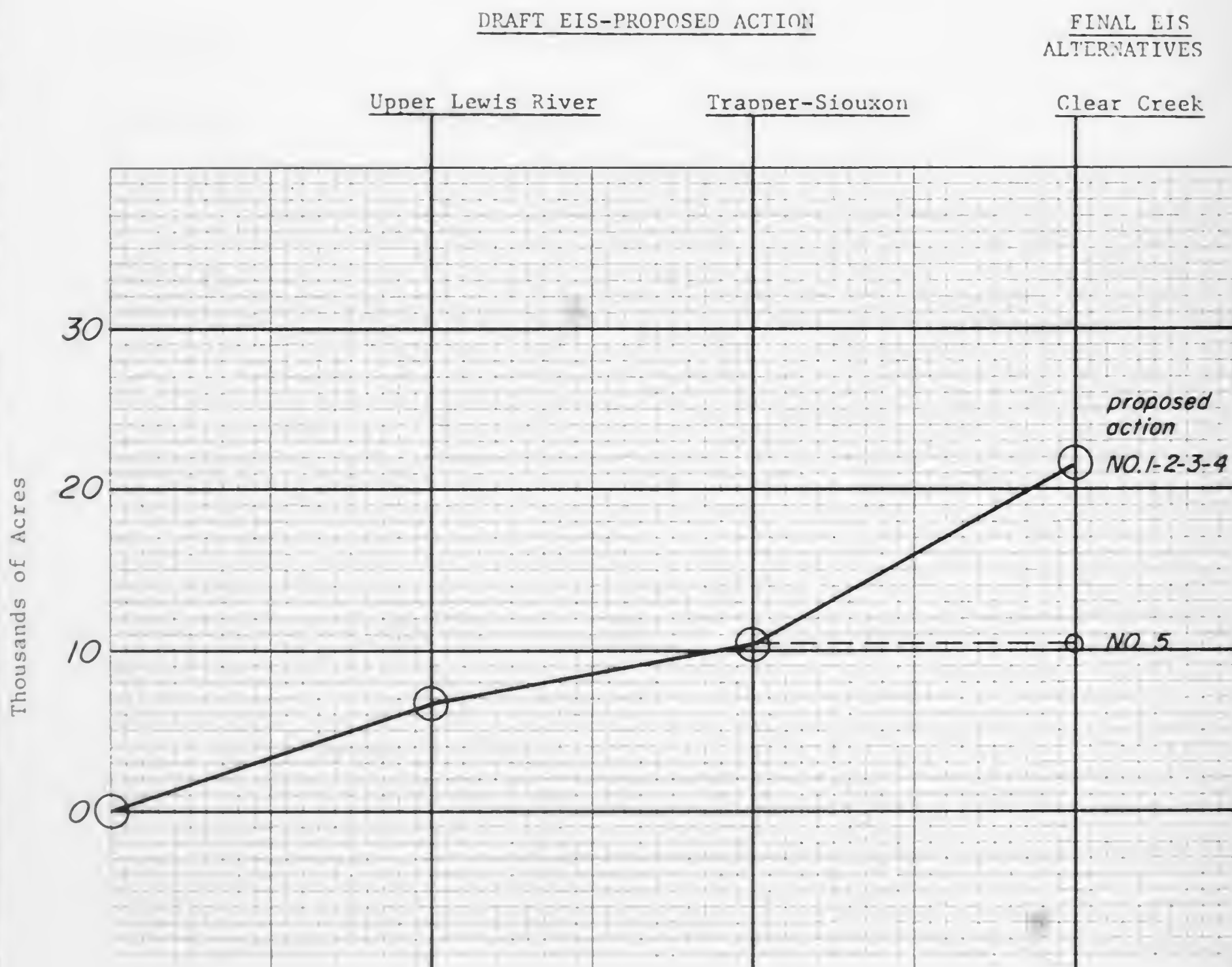
Upper Lewis River

Trapper-Siouxon

Clear Creek



KEY WILDLIFE HABITAT AREA
CUMULATIVE EFFECT OF LAND USE PLANNING



The zero line on the chart represents the starting level of land allocation through Land Use Planning. Although the Multiple-Use Plan allocated land to Wildlife Management, the acreage was not specific.

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THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969

Type of Statement

Final

Type of Action

Administrative

Date of Transmission to CEQ

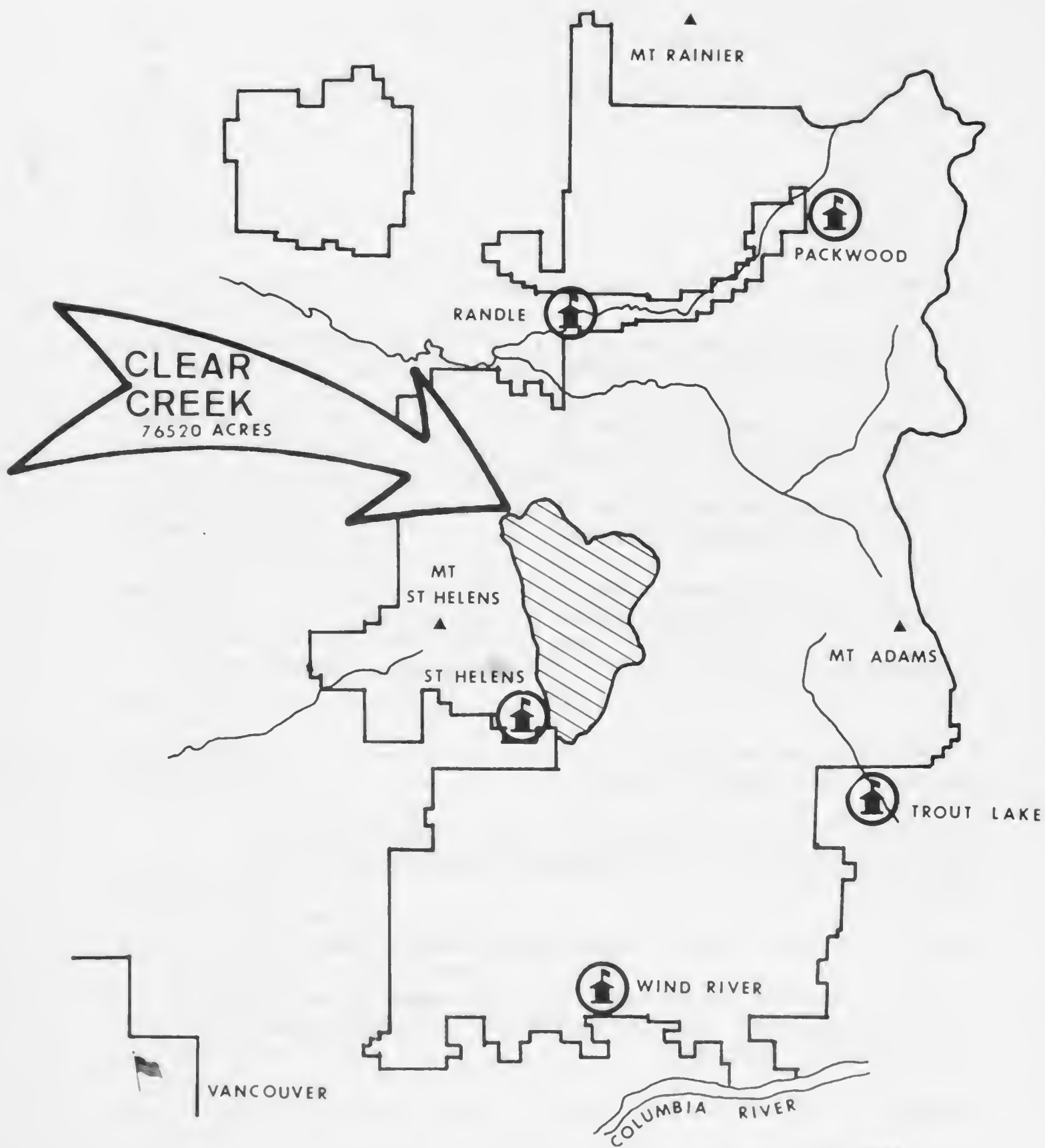
Responsible Official for National
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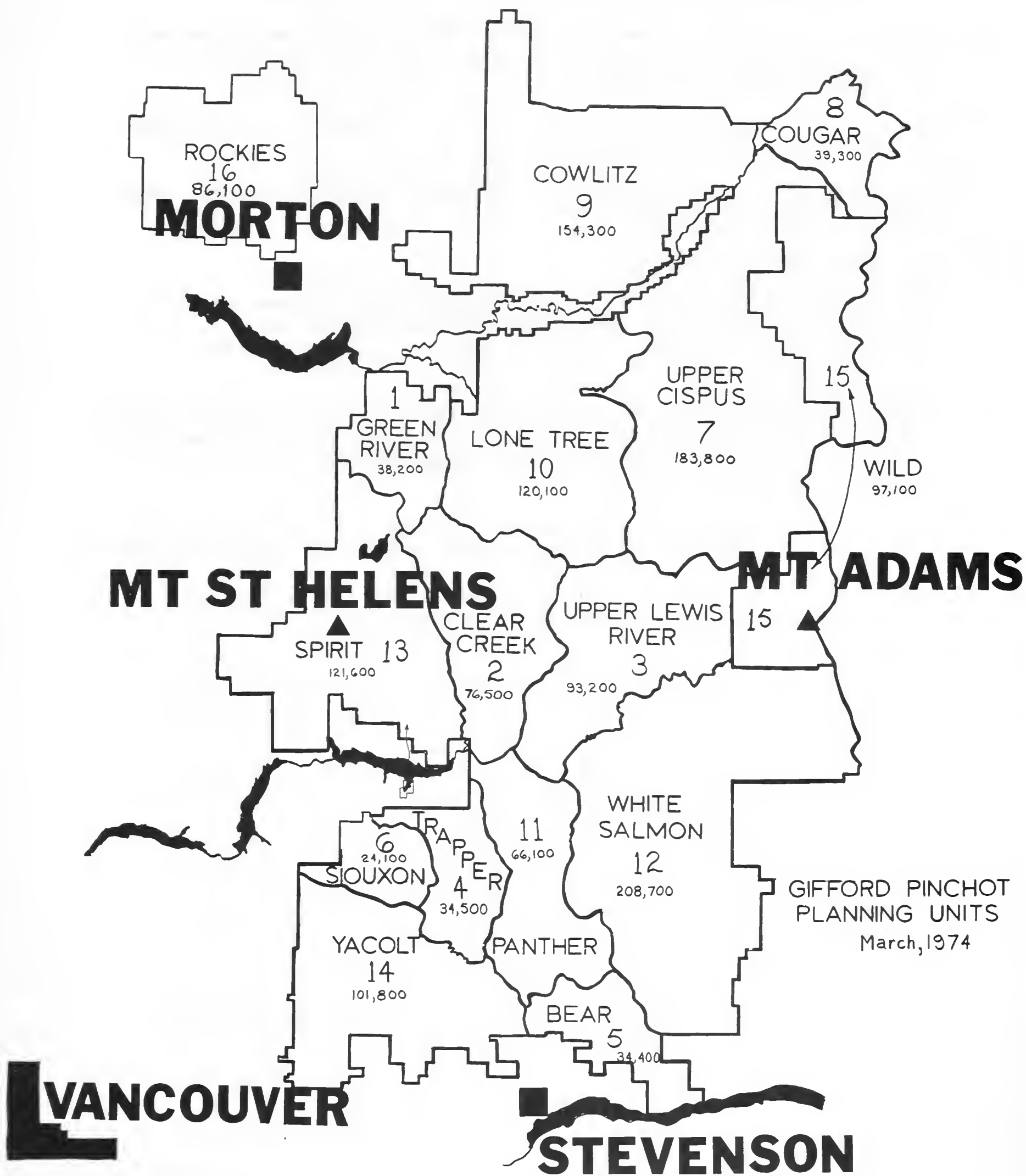
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KEY MAP

U.S. DEPARTMENT OF AGRICULTURE
FOREST SERVICE
GIFFORD PINCHOT NATIONAL FOREST





GLOSSARY

ANIMAL USE MONTH (AUM) - Equivalent to the forage consumed by a 1,000 pound grazing animal in one month, or 732 pounds of air-dried feed.

BASAL AREA - The area of the cross section of a tree stem at a point four and one-half feet above the ground. Basal area of a stand is usually expressed as square feet/acre.

CARRYING CAPACITY - Maximum resource use which can be sustained without degradation of any of the other resources.

COMMODITY PRODUCTION - Resource outputs in the form of tangible products, such as wood, water, and forage.

DEAD TREE (SNAG) MANAGEMENT POLICY -

This Policy sets forth Forest Service, Region Six, management criteria for maintenance of dead or defective trees necessary for snag dependent wildlife species. Refer to Appendix, page 177 for a more complete description.

FISH HABITAT MANAGEMENT POLICY - This policy statement sets forth Forest Service Region 6 (Oregon and Washington) fish habitat management policy and goals to attain quality management. Refer to Appendix, page 176 for a more complete description.

FOREST LAND CLASSIFICATION - The Planning Unit is classified under each of the Land Use Alternatives as it relates to management of the timber resource. Following are definitions for each of the classifications. This information is included in the Forest Service Timber Management Plan Inventory Handbook, copies of which are available for review at all Forest Service offices:

Nonforest - Land which has never supported forests and lands formerly forested where use for timber production is precluded by development or other uses.

Forest - Land at least 10 percent occupied, or stocked, by forest trees of any size, or formerly having had such tree cover and not currently developed for nonforest use.

Unproductive - Forest land incapable of producing 20 cubic feet of wood per acre annually, and land permanently inoperable.

Productive - Forest land capable of management for continuous crops of timber.

Productive Reserved - Productive forest land withdrawn from timber utilization by statute or administrative regulation.

Deferred - Commercial forest land withheld from timber management because of possible pending legislative action that would affect its status as timber-producing land. These areas are not included in the land base for calculating sustained timber yield.

Commercial Forest - Forest land capable of management for continuous crops of timber which has not been reserved or deferred.

Standard - The portion of the commercial forest land on which timber crops can be grown and harvested with adequate protection of all resources under the usual provisions of the Forest Service timber sale contract.

Special - That portion of the commercial forest land that needs specially designed treatment of the timber resource to achieve landscape or other key resource objectives.

Marginal - Commercial forest land not qualifying as standard or special because of excessive development costs, low product values, or resource protection constraints.

Unregulated - This is commercial forest land that will not be scheduled for timber production under sustained yield principles.

FULL TIMBER YIELD - Timber output with no reduction due to other resource uses or constraints.

MANAGEMENT AREA - Specific areas of management shown on maps of Land Use Alternatives. It should be noted that these do not indicate a single use, in most cases several uses will occur within these areas.

Water Quality Protection - Streams designated are those identified as Class 1 and 2 streams under Streamside Management Units.

Wilderness Study - Includes all Inventoried Roadless and Undeveloped areas within the Planning Unit. These areas would be further studied for their potential for Wilderness under the Wilderness Act. They would be managed to protect their wilderness character pending that study.

Unroaded Area - These areas would be managed basically for primitive recreation. Roads and timber harvesting would not normally be planned within these areas.

Key Wildlife Habitat - The areas shown have been identified as requiring modification of other resource activities to maintain or improve the habitat for species which are present. They include such habitat as an elk calving area, big game winter range, and vegetative buffer strips around meadows, lakes, and marshes. Roads and timber harvesting would not be specifically excluded though certain limitations may be placed on such uses.

Developed Recreation - Included in these areas are campgrounds and picnic sites accessible by automobile. No off-road sites are included in this description.

Timber Management - A wide variety of uses would be expected to occur within these areas, including among others roads, timber harvesting, and dispersed recreation.

MM BD. FT. - One million board feet of solid wood. One board foot measures 12 inches x 12 inches x 1 inch thick. The average house with 1,400 square feet of floor space requires about 15,000 board feet of lumber and other wood products.

OLD GROWTH - Overmature trees well past their optimum growth period and past rotation age.

OVERSTORY - Scattered older trees over a stand of much younger and shorter trees.

PERMANENT RANGE - Naturally occurring range suitable for domestic livestock grazing. Examples would be meadows and other open areas in which vegetative changes will occur generally by natural succession.

POTENTIAL YIELD - The level of timber harvest represented by intensive management on every available acre. As used herein, these practices include reforestation, full stocking level control, and use of genetically superior stock.

PROGRAMMED HARVEST - That part of the potential timber yield that is scheduled for harvest annually. It is based upon current demand, funding, silvicultural practices and multiple use considerations. It is the level of harvest represented by intensive management on all accessible acres only. This yield is allocated by Ranger District, not by Planning Unit.

RECREATION

Developed - Recreation activities normally occurring at developed sites such as campgrounds and picnic areas.

Dispersed - Recreation activities other than developed, characterized by low density use.

Roaded - Activities normally expected to occur in roaded areas such as scenic driving, some fishing and hunting, and others relatively road oriented.

Unroaded - Activities here are those normally associated with undeveloped, or unroaded areas. Examples include backpacking, photography, horseback and trailbike riding. Many of these same activities are shared with the Roaded areas.

REGENERATION CUTTING - A cutting practice designed to start a new, vigorous crop of trees. To qualify for regeneration cutting a stand must be over rotation age, and (1) lack an understory of acceptable stocking worthy of management, or (2) have a disease infected understory which will not develop into a future crop, or (3) have an understory which is not currently physically possible to retain during logging and slash disposal operations, or (4) are under rotation age but are damaged by wind, insects, or fire.

RESOURCE OUTPUT - Measurable amounts of resource production or use, for instance: dollar value, timber volume harvested, number of hikers served, number of livestock grazed, etc.

RIPARIAN VEGETATION - Vegetation growing along the banks of streams or other water bodies.

ROTATION (Age) - The period of years required to establish and grow timber crops to a specified level of maturity, normally from 90 to 140 years, depending on species and stand management.

SERAL - Those vegetative species which occupy a site in the earlier stages of plant succession, as opposed to the climax species which would ultimately predominate.

SILVICULTURE - The science and art of growing and tending forest crops based on the knowledge of silvics.

SILVICS - The study of the life history and general characteristics of forest trees and stands with particular reference to environmental factors as a basis for the practice of silviculture.

SITE CLASS - A measure of the productive capacity of a site for growing forest trees. Following is an example of Site Class for Douglas-fir trees, based on those trees in the stand receiving adequate sunlight and free to grow under forest conditions. Douglas-fir site class is used herein because it is the most valuable species in the Planning Unit.

<u>Class</u>	<u>Total Average Tree Height In Feet at 100 Years</u>
I	200
II	170
III	140
IV	110
V	80

Site class is based upon a specific tree species and the site class for one cannot be used interchangeably for another species. Each species has its own requirements and growth characteristics. Site class V for Douglas-fir could be Class II or III for Noble fir. Site Classes IV and V on the Gifford Pinchot National Forest are very productive when compared with higher sites for some species growing elsewhere.

SOIL RESOURCE INVENTORY - Published by the Forest Service in July 1971, this inventory of the soil resource was made to provide some basic soil, bedrock, and landform information for management interpretations. It is the basic soil reference document on the Gifford Pinchot National Forest to assist the land managers in applying multiple use principles. Copies are available for review at the office of the Regional Forester and all offices of the Gifford Pinchot National Forest.

STREAMSIDE MANAGEMENT UNITS - The stream and an adjacent area of varying width where practices that might affect water quality, fish, or other aquatic resources are modified as necessary, to meet streamside management unit goals for each class of stream. The width of this area will vary with the management goals for each class of stream, characteristics of the stream, surrounding terrain, and type and extent of the planned activity. Refer to Appendix, page 180 for a more complete description.

SUSPENDED LOGGING METHODS - Timber harvesting methods which remove logs from the forest by suspending them free of the ground, in some instances one end may be on the ground. In some cases they may be suspended above the tree tops. Examples of these log removal methods are skyline, balloon, and helicopter.

THREATENED AND ENDANGERED PLANT SPECIES

Threatened - Those species of plants that are likely to become endangered within the foreseeable future throughout all, or a significant portion of their ranges.

Endangered - Those species of plants in danger of extinction throughout all or a significant portion of their ranges. Existence may be endangered because of the destruction, drastic modification, or severe curtailment of habitat, or because of over-exploitation, disease, predation, or even unknown reasons.

Refer to list of threatened and endangered species prepared by the Smithsonian Institute as directed by the Endangered Species Act of 1973. The final list has been presented to Congress but has not been published as yet in the Federal Register and is considered a recommended list at this time.

THREATENED AND ENDANGERED WILDLIFE SPECIES - These species are protected by the Endangered Species Act of 1973 and include the following:

Threatened - Species of wildlife that are so few in numbers, or so threatened by present circumstances, as to be in danger of extinction.

Endangered - A wildlife species whose prospects of survival and reproduction are in immediate jeopardy. An endangered species must have help or extinction will probably follow.

Refer to list of threatened and endangered species published in the Federal Register and maintained by the Office of Endangered species and International Activities - Fish and Wildlife Service - U.S. Department of the Interior.

TIMBER MANAGEMENT PLAN - Each National Forest maintains a Timber Management Plan. These plans coordinate timber management activities with other resource uses and are prepared for a 10 year plan period. The current Plan on the Gifford Pinchot National Forest was approved in May 1975.

Specifically, the Plan summarizes the present timber situation, interprets policy on a local basis, identifies and classifies the land as to suitability for timber production, prescribes treatments of timber stands, and determines harvest goals.

The current 1975 Plan is available for review at the office of the Regional Forester and all offices of the Gifford Pinchot National Forest. The Final Environmental Statement on this Plan covering the period of 1975-1984 was filed with the Council on Environmental Quality on February 21, 1975.

TRANSITORY RANGE - In the case of domestic grazing animals, this range would mostly be found in recently cut timber harvest areas. For the first few years after harvest these areas produce varying amounts of grasses and other low browse species. As the young coniferous trees grow they shade these browse species out and the range decreases in grazing value.

VISITOR DAY - A visitor day consists of 12 visitor hours which may be aggregated continuously, intermittently, or simultaneously by one or more persons.

VISUAL RESOURCE MANAGEMENT SYSTEM - A Forest Service system used to provide direction for managing the scenic qualities of the landscape. This system is described in two volumes. They are: National Forest Landscape Management, Volume 1, U.S. Dept. of Agriculture Handbook No. 434, and Volume 2, Handbook No. 462. These documents are available for review at most Forest Service offices. They may be obtained from the Superintendent of Documents, Washington D.C.

Visual Quality Objectives - Goals, or objectives, that describe acceptable degrees of visual alteration allowed in the natural landscape.

Retention Objective - The most restrictive visual quality objective wherein management activities are not evident to the casual forest visitor.

Partial Retention Objective - Management activities remain visually subordinate to the natural appearance of the landscape.

Modification - Man's activities may dominate, but only as a natural appearing composition when viewed from any distance.

Maximum Modification - The least restrictive objective, allowing man's activities to dominate. They must present a natural appearing composition only when viewed from a distance.

Mapping of the various Quality Objectives depends heavily upon the area seen from various travel routes such as roads and trails. The Objectives included in this environmental statement are based upon the existing roads and trails. These Objectives are then considered to be the same for Land Use Alternative Nos. 1 through 4. Further refinement would depend upon exact location of additional travel routes for whatever Land Use Plan is finally selected for implementation.

I. DESCRIPTION

A. INTRODUCTION

The Forest Service is charged with the responsibility of administration of the National Forests. People are concerned about the wise use and management of these lands. They also want to participate in decisions on how these lands will be used.

To help in planning for the use of these lands, a more intensive system of land use planning has been developed and is being implemented by the Forest Service. The system has four interrelated parts: The Area Guide, the Unit Plan, the Forest Land Use Plan and the Program Budget.

The Forest Service Pacific Northwest Region, comprising the states of Oregon and Washington, has been divided into six Planning Areas. Planning Areas are geographic areas with somewhat similar physical, economic, and social characteristics. Area Guides have been developed for each Planning Area.

The Area Guide assesses the economic, environmental, and social relationships of the National Forests to the Area. It identifies the management and resource situations, establishes management direction, and sets minimum environmental protection and coordination requirements. Coordination and blending of the six Pacific Northwest Area Guides will help assign program and planning priorities at the Regional level.

Areas are divided into Planning Units. The size of the Unit is influenced by social, political and economic considerations and its manageability. It generally conforms to natural drainages and may extend beyond National Forest boundaries where activities on other lands have impacts on the National Forests.

Unit Plans are developed within the broad guidelines of the Area Guide and contain information about what the land is capable of with respect to meeting various social and economic demands. They also provide coordinating criteria for planning projects to be implemented in the Planning Unit. Requirements set forth in the Area Guide for environmental protection may be increased but not lowered.

The Clear Creek Planning Unit is one of 16 similar Planning Units into which the Gifford Pinchot National Forest has been divided. Within the next four years Environmental Statements are expected to be filed for each of the other 15 Planning Units. Refer to map on page xi.

The Area Guide, Planning Unit Plans, and specific activity direction are grouped on each National Forest into a package called the Forest Land Use Plan.

Land management opportunities identified through the Unit Planning process are implemented through more detailed project planning and inclusion in the Program Budget. The Program Budget identifies the objectives for management of the National Forests.

Some of the basic Acts providing for the establishment and management of the National Forests are discussed briefly in the Appendix.

As the human population has increased, conflicts between user groups have rapidly developed. There is a distinct air of urgency to develop and implement a more complete, indepth, land use plan than is currently in existence.

The purpose of this plan is to provide a desirable balance of resources to meet the needs of the people, including maintenance of the environment's ability to sustain that level of resource outputs.

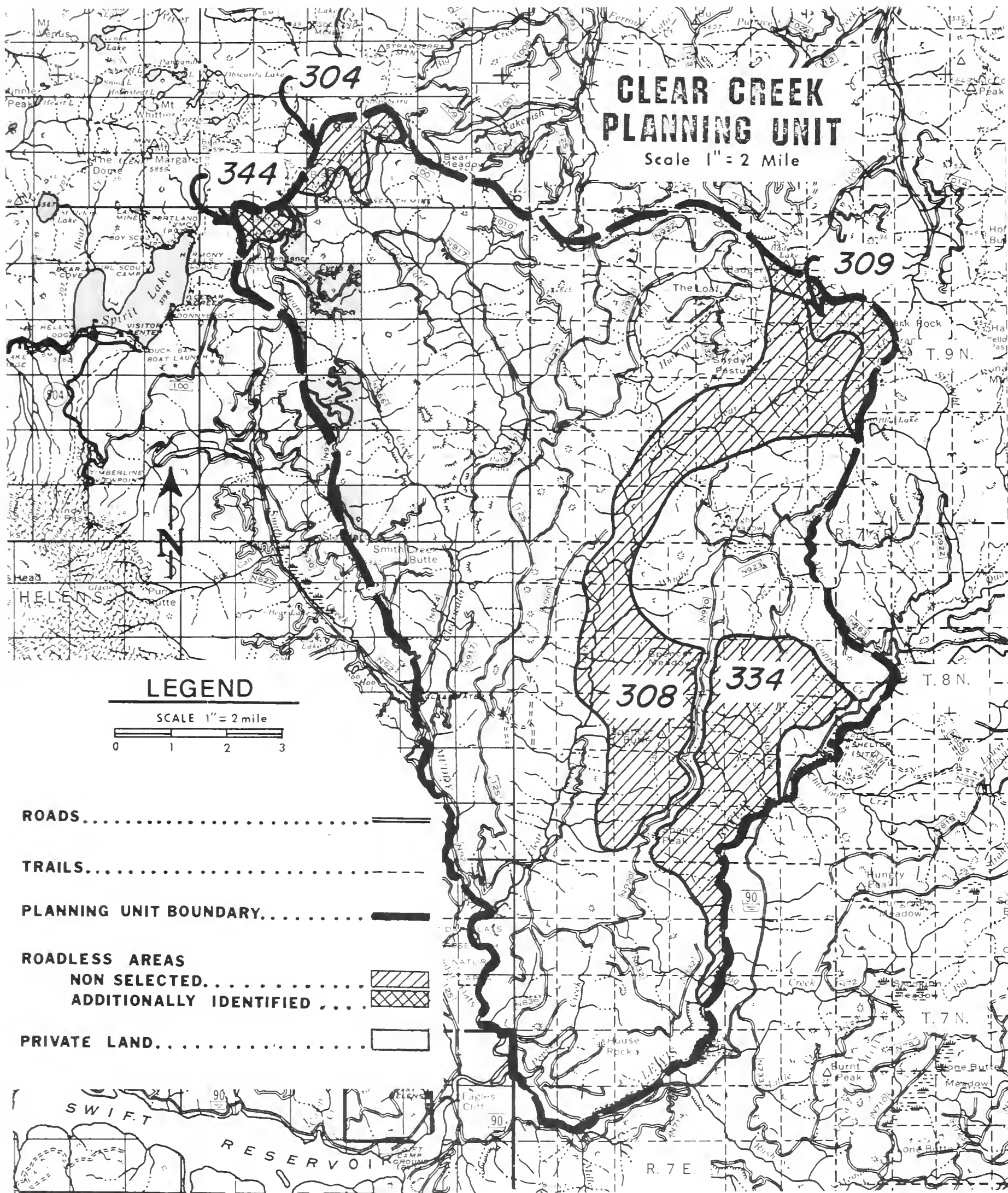
The Proposed Action is the result of an intensive study by the Gifford Pinchot National Forest's Multidiscipline Planning Team. This study, begun in the summer of 1970, included data gathering and analysis from which several land use alternatives were presented to the public by brochure and a public meeting. Public comments received were considered in developing the proposed plan.

Four separate Land Use Alternatives have been developed for the Clear Creek Planning Unit and each will be discussed fully. A fifth alternative, continuation of the present management plan, also exists. This current plan is considered to be too general in nature to be an adequate planning tool for the future. The Gifford Pinchot National Forest Supervisor prefers Alternative No. 1. It is his judgment that this alternative best meets the long-range needs of the public. However, each of the alternatives is considered to be viable.

It should be noted that some of the data figures contained herein are not exactly as they appeared in the Draft Environmental Statement. This is because:

1. All private lands have been removed from the data calculations for Alternatives No. 1 through 4.
2. Some portions of the Nonforest/Unproductive Land Class were erroneously included in the Marginal Land Class.
3. There were several minor omissions of Nonforest/Unproductive acres.

These corrections do not create a significant change in the Alternatives.



CLEAR CREEK PLANNING UNIT

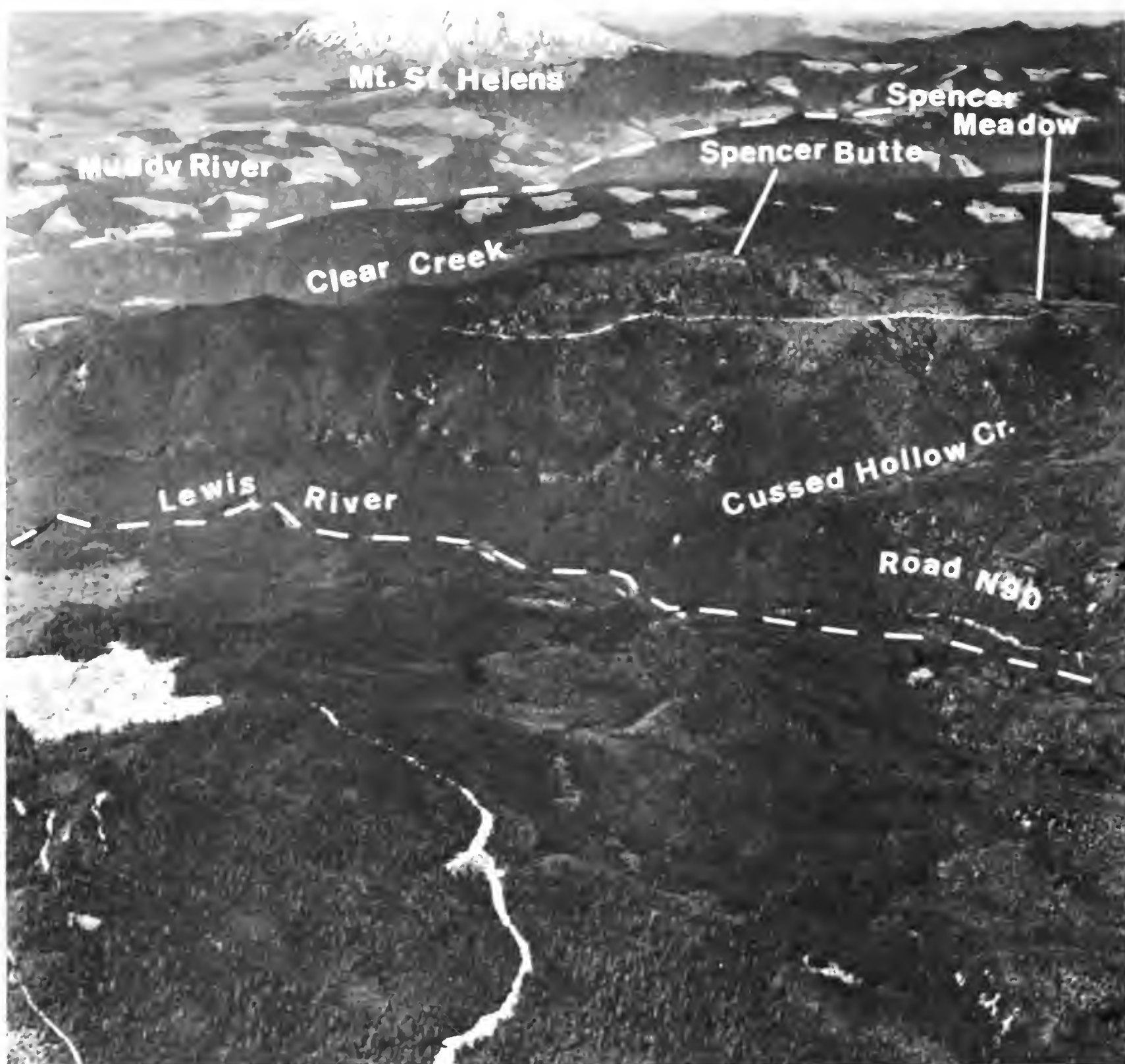
Scale 1" = 2 Mile

LEGEND

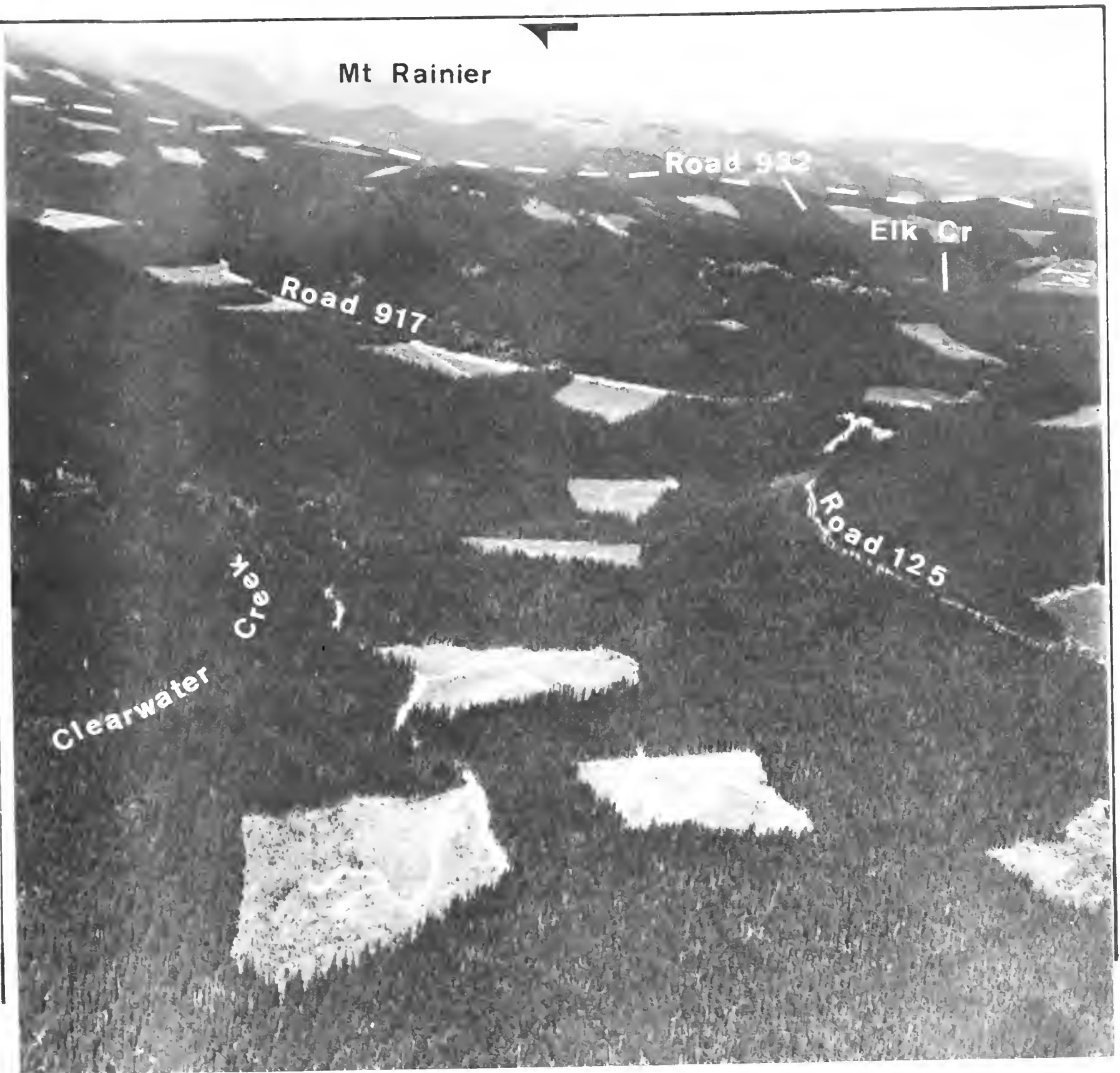
SCALE 1" = 2 mile



- ROADS.....
- TRAILS.....
- PLANNING UNIT BOUNDARY.....
- ROADLESS AREAS
NON SELECTED.....
- ADDITIONALLY IDENTIFIED.....
- PRIVATE LAND.....



Looking West across the Lewis River with Mt. St. Helens in the background. Portion of Roadless Area No. 334 may be seen in Cussed Hollow Creek. Planning Unit boundary is in dashed lines.



Looking North up Clearwater Creek. Mt. Ranier in distant background. Planning Unit boundary is in dashed line.



Looking West across head of Clear Creek drainage and Shark Rock Scenic Area. Kirk Rock is in left foreground with Craggy Peak in line with Mt. Adams. This is a part of Roadless Area No. 309.



Looking Northwest across Clear Creek and Roadless Area No. 308 from Spencer Butte. Note the young timber stand in this burned over area.



Looking Northeast up the lower portion of Clearwater Creek. Road No. N92 is the left foreground and Clearwater Campgrounds within the trees near the lower right corner.



Looking Northeast up Clear Creek. Shark Rock Scenic Area is on ridge in background. Picture was taken near mouth of Elk Creek. A portion of Roadless Area No. 308 is shown.



B. PLANNING UNIT DESCRIPTION

LOCATION

The Clear Creek Planning Unit is located in Skamania County, Washington, about 50 air miles northeast of the Vancouver, Washington/Portland, Oregon population center. It lies in the headwaters of the Lewis River, between Mt. St. Helens and Mt. Adams.

LAND OWNERSHIP AND STATUS⁽¹⁾

The Clear Creek Planning Unit is 76,520 acres in size. Of this total, 74,620 acres are National Forest Land. The remaining 1,900 acres are privately owned, mostly by Burlington Northern Inc. and International Paper which owns about 280 acres at the confluence of Clear Creek and the Muddy River. Resource inventories and outputs herein are based only upon the National Forest land within the Planning Unit.

The 1,900 acres of private land are located in three separate and rather similar situations or blocks. Approximately 880 acres are within two miles south and east of Meta Lake in the higher elevation topography of the Planning Unit. The second block of approximately 740 acres is farther south and straddles the ridge between Bean Creek and Smith Creek. The third block within the Planning Unit consists of one tract of approximately 280 acres located at the confluence of Muddy River and Clear Creek. This block has high big game forage and recreational value. However, it is situated within a powersite withdrawal.

In addition to private holdings within the Planning Unit itself, there are several private sections to the west, between the Planning Unit and the Mt. St. Helens-Spirit Lake complex.

In 1963, the Gifford Pinchot National Forest entered into a Share Cost Agreement with Burlington Northern Inc. and International Paper. Within the Clear Creek Planning Unit this agreement covers all lands in T. 7 and 8 N., R. 6 E. and the western two-thirds of T. 9 N., R. 6 E. The purpose of this agreement is to insure coordinated development, use, and maintenance of roads within this area to best serve the land owned by these parties. International Paper's interest is primarily due to its cutting rights on the Burlington Northern land. Costs are shared by each party depending upon the benefits to be gained. It is expected that all of the timber on the private land in the Planning Unit will be harvested by about 1980. This agreement may have some effect upon National Forest Management since the private landowners must be involved in decisions which might affect their interests.

The Forest Service provides forest fire protection to the private lands in the form of aerial detection, initial attack, and suppression.

(1) Refer to Land Ownership and Status Map on page 183.

TOPOGRAPHY, VEGETATION, AND CLIMATE

The topography, vegetation, and climate are typical of those forested lands found on the western slopes of the Cascade Mountains in Washington and Oregon. The landforms are generally steep and range from smooth slopes to very rugged rocky areas, although some relatively flat areas do exist, mostly adjacent to the larger streams. Some of the most rugged areas in this Planning Unit are found in the Shark Rock Area, and on the lower slopes in the Clear Creek and Lewis River drainages where rock outcrops and bluffs are common. Elevations range from 1,000 feet at the Lewis River to 5,726 feet at Craggy Peak.

Approximately 98 percent of the Planning Unit is covered by coniferous tree species. Small meadow areas are found mostly along ridge tops at the higher elevations. Two of the larger of these are Spencer Meadow, 120 acres in size, and Wright Meadow at 50 acres. Typically Douglas-fir is the predominant species found below the 3,500 foot elevation. Other species commonly found in association with Douglas-fir are western hemlock, western red cedar, and small amounts of Alaska-yellow cedar. Above 3,500 feet are found several species of true fir, including Pacific-silver fir, noble fir and small amounts of subalpine fir. Mountain hemlock and some Englemann spruce are also found at these higher elevations. Although some stands of only a single species exist, most are combinations of two or more species. While hardwood tree species do not represent a significant percentage of the vegetation overall, they are found along the banks of the larger streams. The more common species are alder, maples, cottonwood, and willow. In addition, alder is found in small scattered damp areas throughout the Planning Unit.

Many species of brush and other low growing plants are found in the Planning Unit. Some of the most common are huckleberries, ceanothus, and vine maple.

As is typical on the western slopes of the Cascade Mountains, the climate is relatively mild, with most precipitation occurring through the winter and early spring months. Temperatures vary from an average of about 29° F in January to 56° F in July. Extreme variations of from more than 100 degrees to less than zero degrees occasionally occur. Annual precipitation ranges from 90 to 130 inches, much of this falls as snow. At the higher elevations the snow depth averages about five feet, while at the lower levels an average of about two feet can be expected. Because of the snow most of the Planning Unit is closed to wheeled traffic from the last of November to April or May. Approximately 80 inches of annual precipitation leaves the Planning Unit in the form of streamflow.

AIR

Air quality in the Planning Unit is usually very high. However, slash burning to reduce the fire hazard from logging debris creates considerable wood smoke, generally during the period from April to mid-November. Such burning occurs throughout the forested areas west of the Cascades.

DOMESTIC RANGE

There is no grazing of domestic livestock in the Planning Unit today.

Only a small portion of the Planning Unit, within the proposed Shark Rock Scenic Area, is permanent range suitable for grazing of cattle and sheep. Its suitability is marginal because of its high elevation, small size, fragile soils, and very short grazing season. It would support about 7 cattle, or 35 sheep, for about 2½ months.

Timber harvesting has created many areas of transitory range in the Planning Unit. Where these cutover areas are located on slopes of less than 30 percent and annually produce at least 200 pounds of usable forage per acre. They have a high potential for grazing domestic livestock. Because of the generally steep topography of the Unit, little of the transitory range is considered of economic importance.

FIRE HISTORY

The long-term influence of natural fires, small and large, in the development and formation of present day patterns of plant life, is evident in the Clear Creek Planning Unit. The present even age, predominantly Douglas-fir stands, are a result of natural fires.

Over the last ten years there have been an average of 10.5 wildfires per year in the Planning Unit. Seventy-one percent of these were man-caused. The remaining 29 percent were started by lightning. The largest fire during this period was 26 acres. The total area burned by all fires was 43 acres. The majority of the man-caused fires resulted from leaving campfires unattended and careless smokers. Records indicate that the number of fires has increased somewhat over the last five years, as the area has been made more accessible to people through construction of new roads. The largest fire on record was the Spencer Fire, in the early 1900's which burned about 15,000 acres from Clear Creek across Spencer Butte, and down Cussed Hollow to the Lewis River.

HISTORICAL AND ARCHAEOLOGICAL

1. The most recent listing of the National Register of Historic Places has been consulted in compliance with Section 106 of the National Historic Preservation Act of 1966. No sites were listed within the Clear Creek Planning Unit.

The National Register of Historic Places is published in the Federal Register. The "most recent listing" consists of a combination of an annual list with monthly updates. The Federal Register published on Tuesday, February 19, 1974, Vol. 39, No. 34, Part II, contains all properties listed as of February 1, 1974. Copies of monthly additions are usually furnished each Forest.

2. In compliance with Section 2 of Executive Order 11593, the Proposed Action will not result in the transfer, sale, demolition, or substantial alteration of lands seemingly with characteristics for future nomination to the National Register of Historic Places.

3. In compliance with section 101(b)(4) of the National Environmental Policy Act and section 1(3) of Executive Order No. 11593, the Proposed Action will not affect, either favorably or adversely, the preservation and enhancement of non-Federally owned districts, sites, buildings, structures, and objects of historical, archaeological, architectural, or cultural significance.

4. The State Historic Preservation Officer has also been consulted concerning historic properties in the Planning Unit. In a letter dated November 12, 1975, the State Conservator states, "A search of our records indicates that there are no State or National Register historic properties or sites listed in the Washington State Inventory of Historic Places within the Gifford Pinchot National Forest at this time."

5. The Gifford Pinchot National Forest contracted with the University of Washington for a Cultural Resources Overview of the entire Forest. This broad survey, completed in early 1976, indicates those areas where more intensive inventories should begin. The Overview lists eight cultural sites within the Clear Creek Planning Unit:

- a. H. Hostetler House
- b. F. Mehl House
- c. Cabin of Hidden Treasure Mine
- d. G. Crego House
- e. C. L. Burbee House
- f. H. A. Stowe House
- g. E. R. Haywood Homestead
- h. McClure House

MINERALS AND ENERGY

Outstanding mineral rights exist on about 160 acres near Meta Lake. These outstanding rights occurred when the Forest Service acquired the surface rights to nine previously patented mining claims. Also, in the Meta Lake area several applications have been filed with the Forest Service to remove pumice stone for cinder blocks.

The Federal Power Commission, an agency of the Federal Government, has requested withdrawal of several hydroelectric power sites along the Lewis and Muddy Rivers extending into the lower end of the Clear Creek drainage. Pacific Power and Light Company, a private enterprise, has filed an application for a hydroelectric project, No. 2112, known as the Muddy River Project, on one of these power site classification withdrawals. This application has been recently cancelled by the Federal Power Commission. The Muddy Project proposed a 200 foot high earthfill dam to be constructed on the Lewis River about 0.3 of a mile below its confluence with the Muddy River. This would have created a 3,100 acre reservoir; 1,760 of these acres would have been within the Clear Creek Planning Unit. The option remains for another party to file an application for this project.

The Secretary of the Interior is authorized by the Geothermal Steam Act of 1970 to dispose of geothermal resources on land administered by both the Department of the Interior, and the Department of Agriculture, including National Forest land. Increasing interest is being shown in geothermal energy for electrical power, space heating, agricultural uses and other commercial applications. The entire Gifford Pinchot National Forest is considered to have the potential to produce such energy according to the United States Geological Survey. No proven sites have been located on the Forest and no deep exploratory drilling has taken place. However, temperature gradient holes are now being drilled by the Washington State Department of Natural Resources and a private firm. These temperature gradient holes are to determine if more extensive exploration is warranted. This drilling is being done at two locations on the Forest. One of these sites is near the Indian Heaven area, about ten miles south of the Clear Creek Planning Unit. The other site is near the Cougar Lakes area, about 30 miles northeast of the Unit. Several individual holes are being drilled at each site.

The Bureau of Land Management has recently accepted 17 applications for exploration within the Clear Creek Planning Unit. These applications cover 35 sections or portions of sections within the Planning Unit and could result in extensive exploration for this resource. In July, 1975, the Gifford Pinchot National Forest began preparing an Environmental Analysis Report concerning the geothermal resource in the Clear Creek Planning Unit. This EAR, to be completed about July, 1976, will describe those areas in which the Forest Supervisor would or would not recommend that the B.L.M. allow geothermal leasing. A recommendation to allow leasing may include additional mitigating measures to protect other resource values. Any proposed development would have to conform to the Geothermal Steam Act of 1970. Since no specific proposals for development have been made, it is difficult to assess any possible impacts. It is safe to say, however, that geothermal development could have a profound effect upon any Land Use Alternative drawn for this Planning Unit.

The Forest has issued a Special Use Permit to private parties covering the construction and use of a private road to a potential mining claim in the Green River drainage, north of the Clear Creek Planning Unit. The Chicago Mine is located one-half mile northwest of Meta Lake, just out of the Clear Creek Planning Unit. The road, built in 1972, runs north from Road No. 100, about one-quarter mile east of Meta Lake. No significant amount of ore has been removed to date. If the mine owners should begin removing substantial amounts of ore in the future a corresponding increase in truck traffic could be expected on roads in the northwest part of the Planning Unit.

Little active mineral exploration is being conducted in the Planning Unit at this time. At the turn of the century, the northwestern corner of the Unit experienced intensive mineral interest as part of the St. Helens Mining District (unorganized). Copper was the principle mineral being sought. Present activity is limited to annual assessment work on one claim.

RECREATION

The Forest Service maintains the Clearwater Campground near the confluence of Clearwater Creek and Muddy River. This is a drive-in site suitable for either tent or trailer camping. The only other recognized sites are small walk-in minimum development camping areas at St. Charles and Meta Lakes. These sites have averaged about 12,000 visitor days use annually over the last eight years. Trails in the Planning Unit average about 1,700 visitor days use each year for hiking, horseback riding, and trail bike use. Most of the dispersed recreation use occurs during the big game hunting seasons, particularly the elk season. The Clear Creek Unit is one of the most heavily hunted areas for elk on the Gifford Pinchot National Forest. According to State Game Department figures, an average of about 100 bull elk are harvested in or immediately surrounding the Planning Unit each year. Hunters account for approximately 7,000 visitor days use within the Planning Unit annually. An estimated 500 visitor days are spent in fishing, primarily on Clear Creek and the Lewis River. Winter sports use is very light. It is estimated that snowmobiling accounts for about 200 visitor days use and 50 visitor days annually are spent in snowshoeing and cross-country skiing.

The Planning Unit is adjacent to a significant recreation area at Swift Reservoir. This impoundment is one of a series of hydro-electric projects on the Lewis River. Pacific Power and Light Company operates Swift Camp on the reservoir. This popular campground, located about eight miles from the Planning Unit, has 101 spaces for camping or picnicking, as well as boat-launch facilities. The company also maintains Eagle Cliff Park with day use facilities at the upper end of the reservoir.

The privately owned North Woods Subdivision is located at the upper end of the reservoir on State land. In October 1973, this subdivision contained about 100 surveyed summer home sites. Most of these have now been leased.

Three significant waterfalls are found on the Lewis River. These are appropriately named Upper, Middle, and Lower Falls and are located at Alec, Copper, and just above Chickoon Creeks, respectively.

Huckleberry picking is popular in the Spencer Butte Area. A number of kinds of berries are found in clearcut areas for several years after harvesting, before the new trees shade out such low growing species.

The Shark Rock Unusual Interest Area (Scenic) was approved by the Regional Forester in 1968. However, since that time Forest Service policy has made this designation obsolete. This area must be established under regulations set forth in 36 CFR 294.1 if such management is to be continued. This Scenic Area is about 3,200 acres in size of which approximately 1,170 acres are in the Clear Creek Planning Unit. This is a ridgetop area of about 5,000 feet in elevation. Principal features are several rugged peaks, alpine meadows and Badger Lake, which is two acres in size.

About 5,880 acres of the Planning Unit are suitable for developed recreation sites, such as campgrounds, based upon suitable soils and slopes of less than 11%. Soil suitability includes an evaluation of such factors as susceptibility to flooding, dustiness, muddiness, erosion, compaction and damage to residual vegetation.

ROADS AND TRAILS

About 133 miles of road exists within the Planning Unit. Most of these are single lane roads with crushed rock surfacing. Main routes are: Road No. N90, which is currently under construction and will soon provide access through the Forest from east to west along the Lewis River. Road No. 125, which provides a link between the Lewis River, and Randle, Washington, on U.S. Highway No. 12 to the north. Road No. N92 along the west boundary of the Planning Unit which joins the Spirit Lake/Mt. St. Helens recreation area to the Lewis River drainage.

Approximately 54 miles of foot trails are found in the Planning Unit. The most significant of these are: Boundary Trail No. 1, which traverses the Forest from east to west and is located on the northern boundary of the Planning Unit, and the Lewis River Trail No. 31, which follows closely along the river itself for about nine miles at the southeastern boundary of the Planning Unit.

SOCIAL AND ECONOMIC⁽¹⁾

The Gifford Pinchot Subregion encompasses an eight county area in southwestern Washington State, including Clark, Cowlitz, Skamania, Klickitat, Lewis, Pierce, Thurston, and Yakima Counties. The Gifford Pinchot National Forest lies in all these counties. The Social and Economic impacts of the various Land Use Alternatives discussed would probably have the greatest direct effect upon the Counties of Skamania, Lewis, Cowlitz, and Clark.

(1) Based upon 1970 Bureau of the Census data.

Major physiographic features in the subregion include a portion of the Columbia River and the southern portion of the Cascade Range in the State. Land cover is predominately forest in the upper and middle elevations and farm land at the lower elevations.

Both the transportation system and climatological characteristics have influenced the economic development of the subregion. Abundant rainfall and moderate temperatures on the west side of the Cascades have encouraged agricultural and timber production.

The transportation system in the subregion includes both primary and secondary roads. The north-south routes are dominated by Interstate 5, which provides the major linkage between the Portland-Vancouver metropolitan area and the Puget Sound area. There are three major east-west routes in the subregion, State Highway, 14, along the Columbia Gorge, U.S. 12, the White Pass Highway, and State Highway 410. A system of state and county roads provide access to the area. The Gifford Pinchot Forest transportation system connects with the county and state roads, providing access into heavily forested areas.

The Gifford Pinchot Subregion is tied economically to both the Portland-Vancouver area and the Puget Sound area.

Flow of goods and services in the northern portion of the Forest is generally oriented to the Puget Sound area, while in the southern counties the flow is toward the Portland-Vancouver area.

There are several areas of urban development, with the most important being the cities of Vancouver in Clark County, Tacoma in Pierce County, and the State capital of Olympia in Thurston County. Other major marketing and trading centers are the cities of Chehalis, Centralia, Puyallup, Longview, Kelso, and Yakima. Vancouver, Longview, Tacoma, and Olympia also serve as major shipping centers. Aside from these major economic centers, smaller cities and towns are dispersed along both sides of the Cascades. Because of the relative absence of dense urban development, and the fact that the majority of land in the subregion is agricultural or forest land, the counties, except for Clark, Pierce, and Thurston, are classed as predominately rural.

POPULATION

Based on statistics compiled by the U.S. Bureau of the Census, the 1970 total population of the subregion was 893,412. This represented a 21.7% increase over the 1960 population of 733,881. The majority of the population is concentrated in the urban centers mentioned above.

In terms of net change in population between 1960 and 1970, all counties in the subregion except Klickitat and Yakima experienced increases. Klickitat County experienced a 10% decline during the decade and Yakima a slight decrease of

less than 1%. Thurston County received the largest net increase, amounting to close to 40%. Clark County registered a growth of about 37%.

Statistics on the urban-rural characteristics of the subregion indicate that the greatest growth is occurring in urban areas. There was a 34.3% increase in the urban population between 1960 and 1970, while there was only a 2.9% increase in the rural population.

The population of the subregion is distributed unevenly, due primarily to the Cascade Mountains dividing the area and the transportation system. Population density in 1970 was above the State average. The subregion had approximately 61.9 people per square mile, while for the entire State there were 51.2 people per square mile. Densities were highest in Pierce County, which had 245 people per square mile. The lowest density was in Skamania County, with 3.5 people per square mile.

Based on national and state trends, future population growth can be expected to occur primarily in and around present urban areas. The availability of employment opportunities in these areas will determine future growth. Greatest increases can be expected in Pierce, Clark, and Thurston Counties, especially the Tacoma and Vancouver areas. Vancouver serves as the residence for many commuters to the Portland metropolitan area, while Tacoma is a growing shipping center.

EDUCATIONAL ATTAINMENT

Compared to the State as a whole, the subregion has fewer residents with an education above the high school level. Within the subregion 48.9 percent of the residents more than 24 years old have completed high school, while an additional 9.6 percent are college graduates. Respective State percentages are 50.8 and 12.7. The disparity is greatest in the less populated counties of Klickitat, Lewis, and Yakima. This reflects the lack of employment opportunities for highly educated people and reflects the rural characteristics of the majority of the subregion.

RESIDENCE AND PLACE OF WORK

Census figures for Clark County confirm that many residents work outside the county (29.4%), and the majority of these probably commute to the Portland area. Cowlitz, Klickitat, and Yakima have the smallest percentages of residents employed outside the county. Skamania County, bordering the Columbia River, also has a high percentage of residents employed outside the county, probably commuting into Clark County or across the river into Oregon to work.

EMPLOYMENT AND LABOR FORCE

The economy of the subregion has historically been based primarily on the abundant natural resources of the region. On the west side of the Cascades, manufacturing of lumber and wood products has been the dominant economic activity with agricultural production the next most important. On the east side of the Cascades, both the forest products industry and agricultural production are dominant in the economy.

In the last decade, the counties of the subregion on the west side of the Cascades have evidenced considerable industrial diversification. Increasing activity in the trade and service sectors is evident as the population has grown and become more urban.

Clark, Cowlitz, Skamania, and Klickitat Counties are economically united by their common frontage on the Columbia River. The Ports of Vancouver, Longview, Tacoma, and Olympia provide docking facilities for ocean-going vessels. The total volume of trade handled by the port districts has expanded in recent years, and future expansion is anticipated.

INDUSTRIAL DISTRIBUTION OF EMPLOYMENT

Examination of census and Washington State Employment data, reveals that manufacturing and trade provide the largest source of employment in the subregion. In the counties with urban centers, Clark, Cowlitz, Pierce, Thurston, and Yakima, employment in the services sector is a significant portion of total employment.

Agricultural employment in the subregion has followed national trends of decline, although expansion of production has occurred. This can be attributed to advances in technology and farm mechanization. In 1970, the subregion's unemployment rate was the same as that for the State, about 7.8%. Klickitat and Yakima Counties unemployment exceeded 9%, while Clark, Lewis, and Thurston were less than 7%. Except for Pierce County, where the rate was 8.4%, the subregion was not dramatically affected by the severe cutbacks in aerospace employment during the 1969-1971 period. Employment in the wood products industry is cyclic, depending on such varying demands as the home building industry and available mortgage money for home buying. Employment declines in pulp and paper manufacturing occurred in 1972, as a result of mill closures and labor disputes.

The employment situation in the subregion is affected by the seasonal nature of employment in the forest and agriculture industries. Unemployment rises significantly during winter months, when weather conditions limit work in the fields and forests.

OCCUPATIONAL STRUCTURES

Grouping of occupations reveals that the subregion has fewer white collar workers (professional, sales, and clerical) than the State as a whole. Within the subregion about 44% of those employed in 1970 were in white collar jobs while the State average was 49%, indicating that the subregion has less diversity in employment opportunities.

PROJECTIONS FOR THE FUTURE

The future employment situation in the subregion will be influenced by several major factors. The continued growth of the Portland-Vancouver metropolitan area will affect employment opportunities in Clark County. In 1973, Weyerhaeuser Company announced plans for construction of two new sawmills and a green-veneer plant in Lewis County as well as two new sawmills in Cowlitz County. The U.S. Corps of Engineers is doing additional construction at the Bonneville Dam on the Columbia River. This project will require relocation of the town of North Bonneville in Skamania County.

The employment picture will also be affected by the national economic situation. Fluctuations in markets and market prices for products from the basic industries will ultimately affect employment; however, increases are expected to continue in the trade and services sector.

FAMILY INCOME

Analysis of data provided by the Washington State Employment Security Department shows that in the counties of the subregion a significant portion of total wages paid comes from the manufacturing sector, particularly lumber and wood products in Cowlitz, Klickitat, and Lewis Counties.

In the Gifford Pinchot Subregion the majority of families have low to middle incomes, with a smaller proportion of high income families than the State as a whole. Both per capita income and median family income levels are lower than the State average. This suggests that in the subregion there are fewer employment opportunities for people in the higher income levels.

In 1970, 7.6% of all families in Washington State had incomes below the poverty level. Only two counties within the subregion, Clark and Cowlitz, had a smaller percentage of families below that level. Yakima County had about 15% while Lewis and Skamania had 11% and 12% respectively.

TIMBER HARVEST DISTRIBUTION

During the five year period, 1970 through 1974, 159.1 million board feet (MM bd. ft.) of timber was harvested from Forest Service land in the Planning Unit. The following table shows the counties in which the purchasers of this timber were located, and the volume harvested by county. Only 7.2 MM bd. ft. of this volume was purchased by firms not having their own manufacturing facilities. It should be pointed out that much of this timber was resold to other processors, or exported, before being milled. Thus not all of the primary manufacturing was done in the specific counties listed:

<u>Purchaser Location</u>		<u>Volume Harvested</u>
<u>State</u>	<u>County</u>	<u>(MM bd. ft.)</u>
Washington	Clark	69.1
	Skamania	3.0
	Lewis	23.8
	Cowlitz	12.0
Oregon	Hood River	12.4
	Columbia	17.9
	Clatsop	6.5
	Clackamas	6.3
	Polk	8.1
		159.1 MM bd. ft.

CONCLUSIONS

Data on income suggests that the majority of residents in the subregion may have been affected by the inflationary trends of the early seventies. Broad scale price increases, taking increasing portions of disposable income, may have an impact on National Forest Management. Smaller amounts of income available for recreation expenditures may lead to more localized recreation by the residents of the subregion. The psychological effects of the energy crisis may contribute to this impact, although this is speculation.

Population trends indicate that growth will occur mainly in and around urban areas, particularly in the western portion of the subregion. The comparative older median age in some counties of the subregion indicates that growth from natural increases may not be as high as in other portions of the State, and future growth may result more from in-migration. Consequently, future population growth may be expected largely as a function of employment opportunities.

The Gifford Pinchot National Forest serves as a recreation area for a much larger public than the residents of the subregion. Close proximity to the Portland metropolitan area makes the southern portions of the Forest easily accessible to a large number of people. The Puget Sound area also

supplies a large potential recreating public. Recreation visits primarily support the services industry and are generally associated with low economic impact to the economy.

Expansion of the economic base in the subregion is anticipated to occur primarily in the manufacturing sector, with particular emphasis in chemical and metalurgical production, lumber and wood products and pulp and paper. Clark County, because of its relationship to the Portland metropolitan area, will probably continue to experience industrial expansion and diversification. Economic growth can be expected to be highest in Clark, Thurston, and Pierce relative to the other counties in the subregion, although not as high as some other portions of the State.

SOILS

A major influence on soil formation over most of the Planning Unit has been volcanic ejecta of pumice and ash. Some soils have been formed from residual or colluvial weathered bedrock materials and, to a lesser extent, from glacial till materials. The bedrock of the Planning Unit is also of volcanic origin.

Moderately deep to very deep interbedded volcanic ash and pumice derived soils occur on gentle smooth to undulating slopes and on steep smooth to slightly uneven slopes on approximately 50% of the Planning Unit. River alluvium underlies surface soils in the valley bottoms and very gravelly loam subsoils occur on some of the steeper slopes. Bedrock consists of hard andesites, andesitic breccias or breccias. Surface erosion potential ranges from moderate on the gentle slopes to severe on the steep slopes.

Shallow to deep interbedded volcanic ash and pumice derived soils occur on very steep and highly dissected side slopes on approximately 5% of the Planning Unit. Bedrock consists of hard andesitic breccias. These soils are moderately stable and have a severe surface erosion potential.

Very thin, fine, sandy loam or loamy sand surface soils over very thick pumice subsoils occur on 10% of the Planning Unit. Bedrock is hard, competent andesite or breccias and occur 12 feet or more beneath the soil surface. Gentle to steep smooth slopes typify the topography. These pumice soils have a high surface erosion potential.

Shallow to very deep unstable soils, derived from aeolian, residual and colluvial materials, occur on approximately 20% of the Planning Unit. Slumps, landflows and slightly dissected side-slopes characterize much of the topography. Surface soils are coarse sands, sandy loams, and loams with layers of volcanic ash and pumice. The surface erosion potential is severe. Subsoils are silt loams, clay loams, and thick clays. The bedrock underlying these soils consists of moderately hard to soft, highly weathered, and incompetent volcanic sediments and breccias.

Approximately 5% of the Planning Unit consists of steep and rugged upper sideslopes, high elevation ridgetops, and cirque topography. Rock outcrops, talus slopes, avalanche tracks and alpine meadows characterize these lands. Soils range from very shallow gravelly loam and sandy loams to shallow, to deep volcanic ash and pumice. The surface erosion potential is severe on these soils. Timber stands are scattered and primarily are of low site or noncommercial. Management problems are severe because of soils, topographic, and climatic limitations.

Wet meadow soils, fresh sand and gravel deposits along the Muddy River, and a small acreage of soils derived from residuum, colluvium, and glacial till occur on the remainder of the Planning Unit.

THREATENED AND ENDANGERED PLANTS AND WILDLIFE

There are no threatened or endangered plant or wildlife species which have been identified in this Planning Unit to date.

TIMBER

Approximately 69,590 acres, or 93% of the Planning Unit, are productive forest land. Following is an inventory of the existing timber resource by major species type and tree size in the Planning Unit:

<u>Large Sawtimber</u>	<u>Acres</u>	<u>Volume (MM bd. ft.)</u>
Douglas-fir	18,880	885.5
True fir - Mountain hemlock	8,990	422.5
Western hemlock	18,540	807.4
	<u>46,410</u>	<u>2,115.4</u>
<u>Small Sawtimber (11 to 20" dia.)</u>		
Douglas-fir	7,350	206.8
True fir - Mountain hemlock	1,910	39.2
Western hemlock	130	2.1
	<u>9,390</u>	<u>248.1</u>
<u>Poles (5 to 10" dia.)</u>		
Douglas-fir	6,960	-
True fir - Mountain hemlock	30	-
Western hemlock	30	-
Red alder	280	-
	<u>7,300</u>	<u>-</u>
<u>Saplings (1 to 4" dia.)</u>		
Douglas-fir	3,540	-
True fir - Mountain hemlock	40	-
	<u>3,580</u>	<u>-</u>
<u>Seedlings (less than 1" dia.)</u>	1,315	
<u>Nonstocked</u>	1,595	-
SUBTOTAL (Productive Forest Land)	69,590	2,363.5
Nonforest/Unproductive	5,030	-
TOTAL	<u>74,620</u>	<u>2,363.5</u>

Commercial timber harvesting began around 1958 and to date about 500 MM bd. ft. has been removed, mostly from clearcuts.

Site class is a measure of the productive capacity of the land for growing timber. Following is a summary of acres by site class for the Clear Creek Planning Unit for Douglas-fir, which is the single most important commercial timber species west of the crest of the Cascade Range:

<u>Site Class</u>	<u>Acres</u>	<u>%</u>
III	17,710	24
IV	23,230	31
V	28,650	38
Nonforest/Unproductive	5,030	7
	<u>74,620</u>	<u>100</u>

Refer to map of Site Class on page 184.

Site Class IV is average for all productive forest land on the Gifford Pinchot National Forest.

Regeneration potential is a measure of the ability of the area to reproduce a timber stand after it is removed by harvesting or by natural means, such as fire. It is based on soil and climate factors:

<u>Regeneration Potential</u>	<u>Acres</u>	<u>%</u>
High	12,220	16
Moderate	38,260	51
Low	19,110	26
Nonforest/Unproductive	5,030	7
	<u>74,620</u>	<u>100</u>

Refer to map of Regeneration Potential on page 185.

Those areas classified as low will require more care and effort than the methods normally used to reproduce a timber stand. This additional care might include such reforestation practices as containerized seedlings, use of genetically adapted stock, providing artificial shade for seedlings, or such regeneration practices as shelterwood or seed tree methods.

VISUAL

The visual resource, or what the eye sees, is an important consideration in land use planning. The classification here is a part of the resource evaluation made by the Forest's Land Use Planning Team. It is based upon landform and vegetative characteristics within the Planning Unit as compared with the entire Gifford Pinchot National Forest. Briefly, those areas of steeper, more rugged topography covered with vegetation exhibiting a wide variety of species, sizes, color, and stocking are assumed to be the most scenic.

Scenic Quality	Acres	%
High	20,000	27
Moderate	52,020	70
Low	2,600	3
	74,620	100

WATER

The quantity of water produced by the Planning Unit is high, as is typical of the west side of the Cascade Range; however, most of the run-off occurs during the winter rainy season, and in the spring as the snow melts. At these times the streams typically run bank full. During the dry summer months from July into September, stream-flows are much less.

Water quality is high and all streams meet Forest Service water quality standards described for Streamside Management Units. As a result of the spring snow melt on the slopes of Mt. Adams and Mt. St. Helens, the Lewis River and occasionally the Muddy River run milky white with glacial till during the late spring and summer. Eight small lakes and ponds are located in the Planning Unit, the largest of which is Meta Lake at nine acres in size.

Pacific Power and Light Company operates three hydroelectric power plants on the Lewis River. These are, the Ariel Dam on Lake Merwin, Yale Dam on Yale Lake, and Swift Dam on Swift Reservoir. They are located about 34, 21, and 12 miles below the Planning Unit respectively.

Anadromous fish, including steelhead, smelt, cutthroat trout, chinook and silver salmon are found below Ariel Dam. These fish support a significant sports fishery in the lower Lewis River.

The town of Woodland draws water for domestic use from the Lewis River. This town, with a population of 1,622, is located on Interstate Highway 5 near the mouth of the Lewis River.

The Gifford Pinchot National Forest is now establishing a non-point source water quality monitoring program using a network of baseline and project stations. Data collected at these stations will be used to evaluate the physical, chemical and biological quality of National Forest waters. These stations are being installed under this ongoing program as funds are made available to the Forest. Baseline stations are being established on the principal watersheds and located at or near the National Forest boundary. These stations will characterize current water quality conditions, monitor the accumulative impacts of land management activities and detect trends in water quality. Currently, baseline stations are located on the Cispus River, Wind River, and Clear Fork of the Cowlitz River. Another station is to be placed on the Little White Salmon River during the summer of 1976.

There is one full range baseline station in the Clear Creek Planning Unit, it is located on the Lewis River at Road No. N836. In addition, two additional baseline stations are within the Planning Unit. These are located on the Muddy River at Road No. 125 and on Clearwater Creek near the Muddy River. Both of these are for temperature and turbidity data only. Project stations are established to monitor the impact of an individual land management activity on water quality, e.g., road construction, timber harvest, forest fertilization, pesticide spraying and slash burning. Project monitoring will determine if State and Federal water quality standards are being met and will provide information that will be used in planning and designing future projects.

The Soil Conservation Service, of the Department of Agriculture, operates two snow courses within the Planning Unit. They are: Lone Pine Shelter in Section 8, T. 9 N., R. 7 E., and Spencer Meadow in Section 16, T. 8 N., R. 7 E. During the winter months periodic readings are made of the snow depth and water content. This information is used in forecasting expected run-off for operation of hydroelectric projects on the Lewis River and in flood forecasting.

WILDERNESS

None of the area within or immediately adjacent to the Clear Creek Planning Unit is presently classified under the Wilderness Act of September 3, 1964.

In 1973 the Forest Service completed the Roadless Area Review and Evaluation. RARE was an extensive review and inventory of National Forest Roadless and Undeveloped Areas. The Final Environmental Statement for RARE was filed October 15, 1973, by the Chief of the Forest Service. Roadless and Undeveloped Areas of at least 5,000 acres and smaller areas adjacent to existing Wilderness or Primitive areas, were inventoried and rated for desirable Wilderness quality, effectiveness, cost and public support. From the 1,449 areas inventoried in the National Forest System, 274 New Study Areas were selected. The purpose of the selection process was to identify which undeveloped lands should be given priority for further study, to determine which would be recommended for addition to the Wilderness Preservation System.

Those areas not identified as New Study Areas in the original inventory were called Non-selected Areas. The New Study Areas will undergo further study, beyond the current land use planning effort described in this Environmental Statement, before final decisions are made by Congress. The Non-selected Areas could be managed for other than Wilderness if the current land use planning does not recommend them as New Study Areas. Additionally Identified Areas, such as Meta Lake No. 344, will be treated as Non-selected Areas until the land use planning process is completed for the individual Planning Units.

The Clear Creek Planning Unit contains all, or portions of, five Inventoried Roadless Areas. None of these were included as New Study Areas in the Final Environmental Statement for the RARE inventory. One of these areas, Meta Lake No. 344, was identified in February, 1976, and did not appear in the original RARE inventory, or the Draft Environmental Statement for the Clear Creek Planning Unit.

<u>Roadless Area Name</u> ⁽¹⁾	<u>Number</u>	<u>Total Acres</u>	<u>Acres in Planning Unit</u>	<u>Productive Forest Land Acres in Planning Unit</u>
Upper Green	304	3,800	1,020	730
Clear Creek	308	10,390	10,390	9,680
Shark Rock	309	4,900	1,390	400
Cussed Hollow	334	6,300	4,890	4,570
Meta Lake	344	<u>670</u>	<u>340</u>	<u>290</u>
		26,060	18,030	15,670

Refer to the map of Inventoried Roadless and Undeveloped Areas on page 190. This map shows the relationship of these areas within the Planning Unit to those adjoining the Unit.

UPPER GREEN AREA, NO. 304

The Upper Green Area straddles the Planning Unit boundary near the northwest corner of the Planning Unit. Most of the area lies to the north of the Planning Unit and encompasses the headwaters of the Green River. That portion of the area within the Clear Creek Planning Unit is relatively moderate in slope and contains several small lakes. The vegetation is mostly mature timber but includes significant areas of rocky and semi-open rocky areas on the slopes of Bismark Mountain and Strawberry Ridge. Trail No. 1 traverses the area from east to west. As described in the Shark Rock Area, this trail receives heavy use by hikers with some horse, bike, and hunter use. Like Shark Rock this is also a relatively high elevation ridgetop area. Its highest point is just over 5,000 feet on Strawberry Ridge. Within the Planning Unit access is provided by Road No. 100 along the south side.

(1) Some of the acre summaries shown here are not the same as originally included in the Final Environmental Statement for RARE. The differences reflect refinements as a result of using better mapping techniques at a larger scale and changes in the definition of Productive Forest Land made through subsequent land use planning.

Within the Planning Unit the variety of experience and scenery is just above average when compared to the rest of the Forest. The quality of isolation is below average due to the fact the area is closely bounded by roads and other of man's activities on three sides. Also, the area is narrow, about two and one-half miles wide north to south.

CLEAR CREEK AREA, NO. 308

The Clear Creek Area joins the western edge of the Shark Rock Area at an elevation of 4,400 feet and drops down the Clear Creek drainage about 11 miles to an elevation of 2,000 feet at its extreme southern end. For the most part the area includes the lower slopes of the drainage, but does include the broad ridgetop area around Spencer Meadow and Spencer Butte. Vegetation is mostly mature timber above Wright Creek and scattered mature and young growth below as a result of past fires. These areas tend to be very steep and rugged with numerous small rock outcrops, and waterfalls which are active during the rainy season and spring run-off periods. The more gentle area around Spencer Butte and Spencer Meadow is covered by scattered smaller second growth trees with much hardwood brush growing in the semi-open areas. Spencer Meadow is a relatively large natural wet area. These semi-open areas are accessible by Trail No. 30 and Road No. N920 and are among the best areas on the Gifford Pinchot National Forest for viewing such wildlife species as elk and bear. The entire Clear Creek area is popular for elk hunting with the most use being around Spencer Butte. At present the only trail in the area is No. 30, which runs north and south across Spencer Butte. It is heavily used by hikers and hunters. Many distant views may be had from the top and sides of Spencer Butte.

Except for the area around Spencer Butte most of Clear Creek is below average for variety of experience, with landscape and scenery somewhat above average when compared to the rest of the Gifford Pinchot National Forest. The Spencer Butte area is high in these categories. The topographic configuration of much of the Clear Creek drainage gives an excellent feeling of isolation even though man's activity is nearby. As a whole the Clear Creek Area is low in isolation quality because of the narrow shape which varies from one-half to two miles in width. Unless the viewer was near the bottom of the canyon much area outside the roadless area would be seen at close range.

SHARK ROCK AREA, NO. 309

Presently 1,170 acres of the Shark Rock Area within the Planning Unit is managed as a Scenic and primitive recreation area. Roads are prohibited and the area is excluded from timber harvest except in the event of a major catastrophe. This is a highly scenic ridgetop area at an average elevation of about

5,000 feet. It contains a number of subalpine meadows and several rugged peaks including Craggy Peak, which is 5,726 feet high, and Shark Rock itself which resembles a shark's head. The fringes of the area are well timbered. Several small lakes are found in this area, the largest is Badger Lake at about two acres in size. Trail No. 1, one of the most significant on the Forest, runs through the heart of the area. The scenery and variety of primitive experience of the area is definitely above average for the Forest. Being a semi-open high elevation area, there are a number of opportunities for viewing distant scenery. Currently the area is used by hikers, horseback riders, bike riders, and a few big game hunters. Except for trails the area has not been touched by the hand of man.

The Wilderness quality most lacking in the Shark Rock Scenic Area is isolation. Even though the area is joined to the east and west by larger unroaded areas, Shark Rock itself is a relatively narrow ridgetop area. Much of it looks down upon the very evident works of man a short distance away.

CUSSED HOLLOW AREA, NO. 334

The Cussed Hollow Area is separated from the Clear Creek Area only by Road No. N920. Its topography is mostly steep with some areas of moderate slopes. Along the Lewis River the slopes are very steep with numerous rock bluffs and outcrops dropping to the valley floor. Above the river the slopes grade to steep and moderately steep and are mostly highly dissected. Except for scattered stands of mature timber along the river most of the area is covered by second growth stands of pole and small sawtimber size. There are no significant meadows in this area. However, much of the northern half of the area is semi-open with considerable hardwood brush, similar to the area around Spencer Butte. Access to this area is by Road No. N920 along the west side and Road No. N90 on the south and east sides.

Trail access is presently provided by Trail No. 31 along the Lewis River, Trail Nos. 24, 19, and 80, all three of which traverse the northern half of the area. Trail No. 31 is a significant low elevation trail on the Forest and receives relatively heavy hiking and some fishing and hunting use. The other three trails receive heavy use during the elk and deer hunting seasons. The Cussed Hollow Area is one of the most popular for elk hunting on the Forest. Being relatively low in elevation on a south slope the area is accessible for a longer season of use than is most of the Forest.

The Cussed Hollow Area is about average for all Wilderness qualities when compared to the Forest as a whole. Opportunities for distant view are very limited in most of the area due to the fairly low elevation.

META LAKE AREA, NO. 344

The Meta Lake Area was added to the RARE inventory in February, 1976, as an Additionally Identified Area. This is a relatively small area totaling 670 acres in size, 340 acres of which is in the Clear Creek Planning Unit. It adjoins the Mt. Margaret Area No. 303 to the west and the Upper Green Area No. 304 to the north. It is similar to these areas in many ways but that portion of the Meta Lake Area within the Clear Creek Planning Unit is divided from the rest of these by a fairly definite ridge. The average elevation of this Area is about 4,600 feet. Topography varies from moderate to steep.

That part of the Meta Lake Area outside the Clear Creek Planning Unit is well covered by large sawtimber stands of western hemlock with some Douglas-fir, silver fir, and mountain hemlock. The vegetation within the Clear Creek Planning Unit is mostly large sawtimber stands of true fir species and mountain hemlock with some Douglas-fir and western hemlock. The area has no significant areas of meadow or other open vegetative types except for narrow stringers of grass near the ridgetops. Just south of Meta Lake itself is a semi-open rocky area of about 50 acres providing a scenic backdrop to the lake.

There are two lakes within the area, Meta Lake at nine acres in size is the largest in the Clear Creek Planning Unit, the second is St. Charles Lake at about three acres. Both of these lakes are in the Clear Creek Planning Unit. The Forest Service maintains very limited walk-in campgrounds at both lakes. Trail No. 1 passes through the Meta Lake Area and provides access to these lakes. Road access is provided by Road No. 100 along the south side of the area. This trail receives heavy use by hikers, with some horse, bike, and hunters. The camps at Meta and St. Charles Lakes receive moderate to heavy use.

That portion of the Meta Lake Area within the Clear Creek Planning Unit is just above average for Wilderness quality when compared to the rest of the Forest. Isolation of the relatively small Meta Lake Area only is adversely affected by the existing roads and associated activities on the east and south sides. On the west side it is attached to the much larger Mt. Margaret Area No. 303 although it is somewhat divorced by the ridge mentioned above.

According to the Roadless Area Review described earlier in this section the desirable Wilderness characteristics of the four Non-selected areas within the Planning Unit were quite low when compared with those selected as New Study Area. The characteristics evaluated included: Scenic Quality, Isolation, Size, Camping Quality, and Variety. Following are the individual numerical rankings as they appeared in the Final Environmental Statement for the Roadless Area Review. The higher the Quality Index the better the overall Wilderness quality:

<u>Area Name</u>	<u>Quality Index</u>
Upper Green	82
Clear Creek	85
Shark Rock	126
Cussed Hollow	105
Meta Lake	96

The areas selected as New Study Areas generally had a Quality Index of 145 or more. Additional areas with a Quality Index of less than 145 were included as New Study Areas only if they were adjacent to existing Wilderness or areas being considered for Wilderness, had a high degree of public support, represented an ecosystem not presently included in the Wilderness System, or were originally recommended by the Regional Forester.

WILDLIFE

A wide variety of wildlife species are now found in this Planning Unit. Many types of wildlife habitat exist.

Although most of the Planning Unit is covered with coniferous tree species, there are a number of small meadows, clearcut areas, and rocky sites which support a variety of low growing browse plants. There are about 46,400 acres in old growth and mature conifer habitat. This particular habitat is important as big game feeding areas during winter storms, as nesting sites for certain hawks, squirrels, and owls. It also provides den sites for bear, raccoon, and others.

Some of the wildlife species found in the Unit are elk, deer, blackbear, beaver, raccoon, mink, muskrat, bobcat, cougar, showshoe hare, chickaree, and white-footed deer mouse. Both blue and ruffed grouse are common inhabitants. Pika are found in many rock slide and talus slope areas. A few marmots are found in the semi-open rocky areas at higher elevations. Osprey are occasionally sighted along streams. Band-tailed pigeons and other migratory birds pass through the Unit. Several species of fish are found in the larger streams, as well as Meta Lake and Ghost Lake. These include rainbow and brook trout, native cutthroat, Dolly Varden, and white fish. No anadromous fish such as salmon or steelhead are found in the Planning Unit. They are blocked by the Ariel Dam, located on the Lewis River 34 miles below the Planning Unit. As mentioned under Water several species of anadromous fish are found below Ariel Dam. Approximately 7,000 acres of the Planning Unit are classified as high quality habitat for deer and elk based upon availability of food and cover. The largest block of this high quality habitat is found in the old burn from Spencer Butte east and south into the Cussed Hollow drainage. Here the second growth conifers are scattered but are large enough to provide excellent

escape cover for protection while allowing many low forage plants to thrive beneath them. Similar habitat may be found in clearcut units for a short period of time after harvesting and regeneration of the area. In most of these areas the habitat will slowly change as the trees grow and shade out more and more of the low browse plants.

Winter range is important to deer and elk. About 9,550 acres of such range is found in the Clear Creek Planning Unit. It is assumed that during the average winter most of these animals will be found below an elevation of 1,800 feet. The location of this range is along the Muddy and Lewis Rivers, up Clearwater Creek to about Bean Creek, and up Clear Creek to the area of Wright Creek. The carrying capacity of the winter range is about 200 elk. Very few deer utilize this winter range because of deep snow conditions common to this area. Summer elk population in the Unit increases to approximately 400 animals as elk move from winter range on private land to the higher elevations. Summer carrying capacity exceeds the demands of the animal population.

WILD AND SCENIC RIVERS

There are no rivers in the Gifford Pinchot National Forest presently classified under the Wild and Scenic Rivers Act of 1968. None have been recommended for study for possible classification under the Act.



C. THE PROPOSED ACTION - LAND USE ALTERNATIVE NO. 1

The Supervisor of the Gifford Pinchot National Forest proposes that the Clear Creek Planning Unit be managed to provide a variety of resource uses and outputs. Land Use Alternative No. 1, the Forest Supervisor's preferred management plan for the future, provides for every resource use except Wilderness, and domestic range.

A summary of the more significant aspects of this proposal follows:

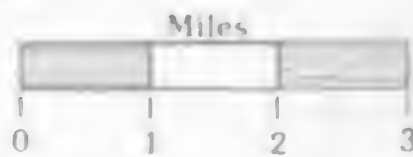
1. Timber Management would be the key use over most of the Planning Unit. In addition, management of this area would include a variety of uses such as dispersed-roaded recreation, watershed, and wildlife.
2. The Shark Rock Area would be recommended for management as a high elevation scenic and dispersed-unroaded recreation area. As explained earlier, the policies under which this area has been managed are now obsolete. This area would be recommended for formal classification under 36 CFR 294.1 as the Shark Rock Scenic Area. Additional area would be added to the Shark Rock Scenic Area.
3. Some of the more rugged and scenic portions of the Clear Creek drainage itself would be managed in an Unroaded status primarily for dispersed-unroaded recreation use.

The area north of Road No. 100, approximately from Independence Pass to Bear Meadow, would be managed in an Unroaded Status basically for dispersed-unroaded recreation.

4. Those portions of the Planning Unit visible from the Lewis River, adjacent to Road No. N90 and Trail No. 31, would be managed basically for recreation and scenic qualities.
5. The visual qualities of the area would be considered in all proposed management activities.⁽¹⁾
6. The quality of certain specific wildlife habitats would be protected. These areas would be managed as Key Wildlife Habitat.
7. Soil values would be considered in all management activities.
8. All streams would be managed to maintain water quality standards.⁽²⁾

(1) Refer to Visual Resource Management System in the Glossary.

(2) Refer to Streamside Management Units in Glossary.

[illegible]

Rationale: Protection of the Lewis River Trail, No. 31 is important. There are many unique features within the Clear Creek Unroaded Area. Most of the Planning Unit is capable of producing wood fiber. Fifty-five percent of the Planning Unit is average or better timber growing sites. There are better areas for developed campgrounds outside the Planning Unit.

TABLE 1 ALTERNATIVE NO. 1 - ACRES BY MANAGEMENT AREA

<u>Management Area(1)</u>	<u>Acres</u>
Shark Rock Scenic Area	3,020
Water Quality Protection	(45 miles)
Nonforest/Unproductive	2,720
Wilderness Study	None
Unroaded Area	6,360
Key Wildlife Habitat	9,620
Developed Recreation	30
Timber Management	52,870
Other Ownership	1,900
<u>Total Acres in Planning Unit</u>	<u>76,520</u>

MANAGEMENT DIRECTION

Specific management direction for The Proposed Action, and the expected outputs to be produced as a result are as follows. Refer to Table 6, page 117, for a summary of expected outputs by alternative.

DOMESTIC RANGE

No grazing of domestic livestock would be planned for the Clear Creek Planning Unit. The small amount of marginally suitable permanent range in the Shark Rock Scenic Area is not recommended for that use because wildlife species and recreation are fully utilizing the area. Addition of more animals would endanger the environment by increasing the potential for damage to the fragile soils and plant cover, and would reduce the quality of the recreation experience.

Timber harvest would tend to continually provide limited transitory range suitable for livestock grazing. As the individual cutover areas are reforested and the young trees grow and replace the browse plants, they will decline in value for this use. It is estimated

(1) The acres shown indicate the primary, or key resource uses, as shown on the map for this Land Use Alternative. To show all of the overlap between the various Management Areas would be difficult to interpret due to the number of legend symbols required and the map scale. As an example, only 2,720 acres of Nonforest/Unproductive is shown here while the total within the Planning Unit is actually 5,030. The difference of 2,310 acres is within areas where no timber harvesting would be programmed. The total acres of each resource are found later in this Statement.

that about 970 scattered acres of suitable transitory range would be available at any given time in this Planning Unit. Because this acreage is scattered over the entire Unit, the feasibility of using the transitory range is questionable and is not planned.

FIRE MANAGEMENT

All land management activities would be designed to obtain fuel conditions which would permit control of a wildfire at 10 acres or less by 10:00 a.m., on the day following discovery.

Industrial operations such as logging and road construction, as well as other activities, will be monitored to assure compliance with State and Federal fire protection laws, regulations, and contractual requirements.

Adequate public contacts will be made to inform people of the fire danger and educate them in fire prevention measures. During periods of extremely high fire danger, all or portions of the Planning Unit may be closed to public entry.

In case of fire within the Shark Rock Scenic Area, protection of the recreation values would be considered in determining what control methods would be used.

HISTORICAL AND ARCHAEOLOGICAL

Historical and archaeological sites or areas will be inventoried and evaluated to assure compliance with the National Historic Preservation Act of 1966 and Executive Order 11593, dated May 13, 1971, "Protection and Enhancement of the Cultural Environment."

Prior to initiating any ground disturbing project resulting from this plan, a reconnaissance or more intensive survey, if necessary, will be conducted to identify historical and archaeological sites or areas.

The eight sites listed by the recently completed Cultural Resource Overview of the Gifford Pinchot National Forest will be protected from any management activity that would alter them until further study can be completed.

LAND OWNERSHIP AND STATUS

The Forest Service objective would be to acquire the private land within this Planning Unit by exchange as the opportunity allows, this would support overall planning and management objectives.

MINERALS AND ENERGY

The status of the outstanding mineral rights and applications to remove pumice stone will not change. The owner of the outstanding mineral rights may at any time decide to remove minerals from these, and such removal would then be regulated by the rules of the Secretary of Agriculture. Additional claims may be filed under the applicable mining laws and regulations.

The construction of a dam on the Muddy River would have a major impact by removing land from timber, wildlife, and certain types of recreation uses. As mentioned previously the Federal Power Commission recently cancelled the license application for this project. At the time this Land Use Alternative was first presented to the public, the Forest Service proposed removal of the power withdrawal. More recently the impacts of an energy shortage have become apparent. Until such time as the energy demand and methods of meeting that demand are clarified, the Forest Service will recommend to the Federal Power Commission that no action be taken to remove the power withdrawal in the event another party makes an application for a similar project. The final decision concerning power withdrawals is made by the Federal Power Commission. Before such a project is constructed, a detailed Environmental Statement would be required. All activities will be conducted as though a dam will not be constructed. There are no activities proposed by this alternative that would preclude construction of a dam at the Muddy site.

Areas along major streams would be withdrawn from mineral entry as needed to protect such resources as soil, water, and fish.

RECREATION

The Shark Rock Scenic Area would be recommended by the Forest Supervisor for designation under Regulation 36 CFR 294.1 as the Shark Rock Scenic Area.

This alternative proposes an area of 1,720 acres for Unroaded status north of Road No. 100, from Independence Pass to Bear Meadow. This relatively high elevation ridgetop area contains several lakes, including Meta, Ghost, and St. Charles Lakes. It is proposed that this area be combined with a similar 470 acre area adjoining it to the northwest in the Green River drainage, with management to emphasize dispersed-unroaded recreation use. Except for the lakes and the area immediately adjacent to Bismark Mountain, the area is well timbered. Timber harvest would be limited to salvage and sanitation cutting unless precluded entirely by critical soils or other resource requirements. In addition, no timber harvest would be scheduled within the area seen from the above lakes, up to one-half mile from lake shores, to provide for visual, wildlife, and recreation use.

Another Unroaded Area of 4,640 acres would be established in the Clear Creek drainage. This area runs from south of Spencer Butte north to about Elk Creek and would be managed primarily for dispersed-unroaded recreation. For the most part, this area is very steep, rugged land with numerous rock bluffs and outcrops. Many small waterfalls cascade over these rocks on both sides of the canyon into Clear Creek. Most of this area, south of Wright Creek, is in second growth timber due to past fires. There are, however, scattered

islands of old growth Douglas-fir, mostly along the bottom of the Clear Creek canyon itself. Above Wright Creek the timber is mostly old growth Douglas-fir. No timber harvest would be scheduled in this area.

Approximately 1,850 acres in the headwaters of Clear Creek would be added to the present Shark Rock Scenic Area. This area is covered almost entirely by true fir and mountain hemlock stands of both large and small sawtimber size.

The proposed Unroaded Area in Clear Creek and the addition to the Shark Rock Scenic Area would be joined by a corridor along Clear Creek. This Unroaded corridor would average about 600 feet in width depending on topography and vegetation. Its purpose would be to provide visual protection for the stream and a proposed future trail to be constructed along Clear Creek. This protection is intended to be over and above the requirements of Visual Resource Management. Timber harvest would not be scheduled in this area.

The existing Clearwater Campground of 10 acres, and the more primitive camping areas totaling 10 acres at St. Charles and Meta Lakes would be continued. A 14 acre picnic area is proposed at Lower Falls on the Lewis River. When finished, this site would provide facilities for 210 picnickers at one time. Included is a planned short trail to provide scenic access to view the falls. Additional overnight automobile campgrounds are not planned within the Clear Creek Planning Unit. The Forest Supervisor believes better sites, which would make less impact on the environment, are available outside of the Planning Unit. This would not preclude limited development of small primitive trailcamps away from roads.

All proposed campgrounds in this alternative would provide a total of 50 family camp units. Picnic areas would provide 60 separate picnic units.

The Boundary Trail No. 1, along the northern border of the Planning Unit, would be retained. This is a scenic high elevation ridgetop trail extending completely across the Gifford Pinchot National Forest from the Mt. St. Helens-Spirit Lake recreation area on the west to the Mt. Adams Wilderness on the east. Trail No. 31, along the Lewis River, would be continued up the river to join with the Boundary Trail No. 1, just northwest of the Mt. Adams Wilderness. Besides giving good access for fishing, this trail would provide a good low elevation route for early and late season use. Another proposed trail would run along Clearwater Creek from the Clearwater Campground to the headwaters of that creek. That portion of Trail No. 30 across Spencer Butte would be retained. This trail is heavily used by hunters. It also provides access to good scenic viewpoints on Spencer Butte, and by traversing sparse timber and brushy areas resulting from past fires, it provides an excellent opportunity to view such wildlife species as elk, deer, blackbear, chipmunks, ground squirrels, and numerous birds.

Trail No. 3, from the Wright Meadow area to Trail No. 1 in the Shark Rock Scenic Area, would be retained.

A trail is proposed along Clear Creek, running from the Muddy River to the Boundary Trail No. 1 in the Shark Rock Scenic Area. Trail No. 31 would be extended down the Lewis River and along the Muddy River to tie in with this trail.

Motorized use would be prohibited on Trail No. 31 and the proposed trail along Clear Creek above Road No. N920.

The area one views, (up to one-half mile) from the Lewis River, Road No. N90 or Trail No. 31 would be managed primarily for recreation and scenic qualities. Except for a number of rock bluffs, this area is heavily timbered, mostly with Douglas-fir. Timber harvest and road construction would be permitted in this corridor so long as such management activities were not apparent from the Lewis River, the road, or the trail and did not seriously detract from the recreation experience.

A wide variety of recreation experiences would be found in the remainder of the Planning Unit. These include opportunities for cross-country hiking and horseback riding, hunting, fishing, and wildlife viewing. Roads, timber harvest areas and other openings would afford many scenic views for those recreationists who enjoy driving through the forest.

Winter recreation opportunities are limited due to the steep topography and deep snows. However, such uses as snow-shoeing, cross-country skiing, and snowmobiling, as well as opportunities for simply "playing in the snow" would continue.

ROADS AND TRAILS

This alternative would result in approximately 90 to 100 additional miles of road construction. The majority of these would be built for the purpose of timber harvest; however, in most cases these roads would be used for a wide variety of purposes, including driving for pleasure and a number of other recreational activities.

Between 40 and 50 miles of additional trails would be required. Most of these would be to provide recreation access to the Unroaded areas along Clear Creek and adjacent to the Shark Rock Scenic Area. Also, Lewis River Trail No. 31 is planned for relocation along the river above Crab Creek. The old trail above that point has been obliterated for the most part by construction of the Lewis River Road No. N90.

The environment of high elevation lakes is so fragile that access to them must be limited. No additional access routes would be developed to these lakes. Only minimal development would be provided at any lake.

No comprehensive plan for future roads and trails has been approved. The detail needed for exact on-the-ground location of these facilities would require an on-site evaluation and multidiscipline team review to be certain that each proposed project is consistent with the overall Land Management Plan approved for the Planning Unit.

SOILS

The soil resource will be a major consideration in designing all land management activities in the Planning Unit.

The Gifford Pinchot National Forests' Soil Resource Inventory contains basic soil information and management interpretations. However, this reconnaissance level survey is broad in scope. As planning for resource use becomes more detailed there is a need to update this information so it more accurately relates to a particular Planning Unit, or a specific project such as an individual road.

As a part of the Forest's land use planning process the Soil Resource Inventory is closely reviewed and adjustments made as a result of better data being available. This process results in some changes in the soil management units as described in the S.R.I. The greatest change involves combining a detailed slope map with the soil management units to produce the Road Location and Timber Harvest Guidelines shown herein on page 177 and page 188. These Guidelines provide an additional benefit by helping to protect water quality.

Under this alternative there are 10,970 acres on which little or no road construction would be allowed. Roads proposed on these soils would receive in-depth studies weighing all of the resource values involved before being approved for construction. In addition, there are 12,080 acres on which roads would be limited to the minimum needed to provide access to significant areas in need of management. Here the roads would be spaced as far apart as is practical and they would cross these soil areas by the shortest route consistent with all resource values. Timber harvest by suspended logging methods would be required on 11,640 acres. These logging and road location criteria are based upon the Soil Resource Inventory and recommendations of the Forest's Multi-discipline Planning Team. More detailed on-the-ground reviews will be required on a case by case basis as each road, timber harvest, or other project is proposed. In actual practice, additional acres will undoubtedly require suspended logging methods, since soil constraints on road location will mean that certain areas simply will not be accessed by roads.

THREATENED AND ENDANGERED PLANTS AND WILDLIFE

This alternative would conserve these plants and protect and manage suitable wildlife habitat as threatened and endangered species are identified within the Clear Creek Planning Unit.

None of these species have been identified within the Planning Unit to date. Management plans would be adjusted as needed to adequately protect such species when their existence is confirmed.

TIMBER

Intensive silvicultural⁽¹⁾ practices would be used to provide the maximum programmed harvest consistent with other resource objectives.

Full timber yield would be realized on 50,120 acres. In addition, some timber would be harvested from areas in which maintenance of other resource values would allow less than full timber yield, such as certain wildlife habitats, areas needed for water quality protection, and specific areas with special visual quality requirements. Tree removal in such areas as the Shark Rock Scenic Area, developed recreation sites, and most Unroaded areas would occur only to improve or benefit these areas for those particular uses. For instance, dead trees which are a safety hazard will usually be removed from a developed site, or in a dispersed recreation area it may be desirable to remove enough trees to provide a scenic view. In addition, timber may be removed to control insect or disease attacks, or in cases of catastrophic losses due to natural causes. Such timber removal would be done using methods having the least possible impact upon recreational or other values. Every attempt would be made to involve the public before a decision to remove timber from these areas is made.

The Proposed Action would provide a potential yield of 29.0 MM board feet annually. The actual annual programmed harvest is expected to be 24.2 MM board feet.

In recognition of the need to protect other resource values, the following reductions in timber yield within the Special land class would be expected:

Other Resource Constraints	Reduction In Annual Yield (MM bd.ft./yr.)
Visual Management	3.1
Stream Protection	0.2
Wildlife Habitat	0.1
Total	3.4

⁽¹⁾Refer to Potential Yield in Glossary.

These reductions have been reflected in the Potential Yield Level of 29.0 MM bd. ft. above. The difference of 4.8 MM bd. ft. between Potential Yield and Programmed Yield represents the available intensive management opportunities that are currently not programmed. These benefits are listed in the Potential Yield Statement in the current Gifford Pinchot National Forest Timber Management Plan.

The Forest Land Classification describes the Planning Unit from a timber management standpoint. Following are the acres by class for Land Use Alternative No. 1:

<u>Class</u>	<u>Acres</u>
Standard	49,920
Special	12,360
Marginal	200
Deferred	None
Unregulated	7,110
Productive Reserved	None
Nonforest/Unproductive	5,030
	<u>74,620</u>

Regeneration cutting would be accomplished by the silvicultural practices of clearcut or shelterwood. These practices would provide for even-aged management and result in stands of trees of about the same age and size scattered throughout the Planning Unit.

Each harvest area must be carefully evaluated before selecting the regeneration cutting practice to be used. However, clearcutting would be the most common practice used as it will best satisfy these criteria in most cases. Also, all other factors being equal, clearcutting is the most economical practice, particularly on steep slopes. There are situations in which clearcutting would not be desirable.

VISUAL

The visual qualities of the Planning Unit would be considered when any management activity is proposed. As an aid to accomplish this goal, the Visual Resource Management System has been developed. This System establishes visual goals, or quality objectives, for the entire Planning Unit. Refer to map of Quality Objectives on page 190.

Mapping of the various Quality Objectives depends heavily upon the area seen from various travel routes such as roads and trails. The Objectives included in this Environmental Statement are based upon the existing roads and trails. These Objectives are then considered to be the same for Land Use Alternatives No. 1 through 4. Further refinement would depend upon exact location of additional travel routes for whatever Land Use Plan is finally selected for implementation.

Visual management would have a significant impact upon timber harvest and associated road location activities. As a result of applying visual management, less than full timber yield would be realized on approximately 11,700 acres within the retention and partial retention areas listed below. No reduction of timber yield is expected in the modification areas.

The following acres by Quality Objective have been identified within the areas proposed for timber harvest in Alternative No. 1:

<u>Quality Objective</u>	<u>Acres</u>
Retention	11,690
Partial Retention	43,410
Modification	7,380
TOTAL	62,480(1)

WATER

Streams would be managed in accordance with established Streamside Management Unit goals. These standards meet or exceed State of Washington water quality standards. Particular emphasis would be given to management activities affecting streams which are important because they serve as domestic water sources, are important habitats for fish, or have a significant impact on downstream water quality. Management of Class I and II streams would usually require leaving vegetative buffer strips, varying from about 100 to 300 feet in width on each side of the stream, depending upon slope, soil, and vegetative characteristics. In most instances, tree removal by partial cutting would be acceptable in this strip, while in others no timber harvesting would be permitted. In some cases, limited clearcutting would be allowed to meet other resource objectives. On some streams existing hardwood, or brush species, may provide adequate stream protection.

Much of the management direction discussed under Soils, above, applies also to water, at least as far as soil erosion is concerned. Erosion is usually the most significant single cause of water quality degradation in a forest environment.

WILDERNESS(2)

No Wilderness Study Areas would be established under this alternative.

- (1) All areas from which timber will be harvested on a commercial basis, including certain soils, wildlife habitat, etc. where less than full harvest is anticipated.
- (2) Refer to RARE Area descriptions on page 24.

Disposition of the Roadless and Undeveloped Areas within the Clear Creek Planning Unit would be as follows:

UPPER GREEN, NO. 304 AND META LAKE, NO. 344

The 1,020 acres of Area No. 304 and 340 acres of Area No. 344 within the Clear Creek Planning Unit would be managed in an Unroaded status. However, portions of these Areas are outside the Planning Unit and are joined to other Roadless Areas outside.

CLEAR CREEK, NO. 308

A portion of this Area, 1,380 acres, would be recommended for addition to the Shark Rock Scenic Area. About 50% of the remaining 9,010 acres would be managed in an Unroaded status along Clear Creek and in the area of Spencer Butte. The remainder would be in Timber Management, except for a small area of key Wildlife Habitat at Spencer Meadow.

SHARK ROCK, NO. 309

All of this area within the Clear Creek Planning Unit would be included within the proposed Shark Rock Scenic Area. However, the majority of Area No. 309 is outside of the Planning Unit.

No management activities would take place which would remove Areas No. 304, 308, 309, or 344, within the Clear Creek Planning Unit, from Wilderness consideration until decisions are made for the adjacent Roadless Areas outside the Planning Unit.

CUSSED HOLLOW, NO. 334

Of the 4,890 acres of this area within the Clear Creek Planning Unit about one-third would be Key Wildlife Habitat, the remainder would be Planned for Timber Management. In addition, that portion of the area one views (up to one-half mile) from the Lewis River, Road No. N90, or Trail No. 31 would be managed primarily for recreation and scenic qualities. The 1,410 acres of Area No. 334 in the Upper Lewis River Planning Unit was proposed for the same type of management in the Draft Environmental Statement for that Planning Unit.

WILDLIFE

Land Use Alternative No. 1 would develop a variety of wildlife habitats.

Within the Shark Rock Scenic Area, Unroaded areas and the Nonforest/Unproductive land class, little or no significant changes in the natural environment would be proposed. Except for occasional trails and similar developments, the habitats in these areas would change only by natural succession.

A managed buffer strip would be maintained around all lakes, ponds, marshes, and meadows to protect wildlife habitat, as well as water quality and visual values. The typical buffer would be up to five chains, or 330 feet in width. Its purpose would be to maintain the basic character of the habitat. Limited timber harvesting and other activities would be allowed if they did not significantly alter the overall vegetation, and thereby damage the character of the lake, marsh, or meadow. Specific management prescriptions, such as partial cutting, extended timber harvest rotations, etc., would be determined on a case by case basis when activities are proposed on the ground. All management activities would be designed to meet Forest Service Region 6 Fish Habitat Management Policy and Streamside Management Unit Goals to protect water quality, fish, and other aquatic resources.

Riparian vegetation is of significant importance to wildlife. More species of wildlife use riparian habitats for all or part of their needs than any other habitat type. Aquatic habitats benefit from riparian vegetation through shade that helps control water temperature, reduction of siltation and bank erosion, and terrestrial insects that provide food for aquatic species. Wildlife buffer strips around lakes, stream protection under Streamside Management Units and the Fish Habitat Management Policy would be used to maintain the riparian habitats.

The deer and elk herds will continue to be highly dependent on the winter range, both within and adjacent to the Planning Unit. This Key Habitat, described on page 30, is shown in Alternative No. 1 along the following streams:

1. Lewis River
2. Muddy River
3. Clear Creek
4. Clearwater Creek

A balance between browse areas and adjacent escape cover would be maintained in the winter range to avoid degrading that habitat, or reducing its present carrying capacity. This would require careful spacing and timing of timber harvest activities, but no reduction in timber yields should occur.

One elk calving area has been tentatively identified. This Key Habitat is located in the headwaters of Elk Creek near the northern boundary of the Planning Unit. Protection for this area would include placing seasonal limitations on any activity which may adversely affect the use of the area for calving purposes.

A total of 11,290 acres would be designated as Wildlife Habitat in each of the alternatives, except No. 5. In Alternative No. 1 1,670 acres of this habitat would be within such Management Areas as Nonforest/Unproductive or Unroaded Areas, in which case the habitat would be essentially protected, or unaltered. These 1,670 acres are not included in the Key Wildlife Habitat for Alternative

No. 1. The Key Habitat shown in the Proposed Action includes approximately 8,700 acres of winter range, 720 acres of buffer strips, and 670 acres in the elk calving area.

Old growth and mature conifer stands are important habitat for a number of wildlife species. This alternative would provide for retaining 6,080 acres of this habitat in areas where timber harvesting would not be programmed because of resource values other than wildlife. Most of these stands would be in Unroaded Areas in Clear Creek and the Meta Lake area, and in the Shark Rock Scenic Area. Smaller amounts would be found in Developed Recreation sites and the Nonforest/Unproductive land class. The 6,080 acres of old growth and mature conifer habitat which would be retained under this alternative would represent about eight percent of the National Forest land within the Planning Unit. It is generally agreed among Forest Service wildlife biologists in Region 6 that the retention of five percent of the Planning Unit in old growth and mature conifer habitat is acceptable to maintain wildlife species associated with this habitat. In addition to the old growth and mature habitat to be maintained in areas where timber harvesting would not be programmed a significant number of acres would remain in such areas as Streamside Management Units and Retention Visual Quality areas. However, with the number of variables to be considered on a case by case basis on the ground it is not possible to determine the exact number of acres or their location at this time.

Management activities and public access would be limited as necessary to prevent harassment of wildlife.

The Forest Supervisor would continue to cooperate with the State Department of Game in making plants of hatchery reared fish in the major streams of the Planning Unit.

WILD AND SCENIC RIVERS

The Lewis River, above Swift Reservoir, was considered for study to determine if any portion should be classified under the Wild and Scenic Rivers Act of 1968. Although this part of the Lewis River is sufficiently free of man-made alterations, the total character of the river is not "outstandingly remarkable" as required by the Act for study leading to possible inclusion in the Wild and Scenic River System. The decision of the Forest Supervisor to not recommend the Lewis River for study under the Act was based upon the following specific items:

1. Scenic values are similar to many other drainages in western Washington and Oregon. Vegetative types and size distribution are common to relatively low elevation drainages. The three waterfalls on the river are not considered to be unusually beautiful on a national scale because of rock color, height, or water volume.

There are no naturally unique or spectacular rock formations, or other striking visual attractions in the drainage.

2. There are no nationally outstanding recreation attractions in the drainage. Primary activities are hunting, some fishing, limited hiking and camping, and in the winter, snowmobiling. These uses are expected to increase upon the completion of Road No. N90 based on past experience with road construction in similar drainages.
3. No unique geologic discoveries have been made in the area. There is limited mineralization and several old inactive mining claims. The most commonly collected rock material is petrified wood which is present in minor quantities along the Lewis River and some of its tributaries. This petrified wood is not especially sought by collectors seeking high quality material.
4. Wildlife species found in the Lewis River drainage are common to western Washington. No threatened or endangered species are known to exist in the area.
5. Native trout are found in the Lewis River, however, an active stocking program would be required to provide a good sports fishery. No anadromous fish are found in this part of the river because they are blocked by a series of dams downstream.
6. There are no nationally unique historical or cultural areas known to exist in or near this portion of the Lewis River.

II. ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION

Any land use plan that proposes activities within the human environment will create impacts upon that environment. Whether these impacts are favorable or adverse frequently depends upon a persons viewpoint. In this Statement all of the impacts are listed first without making a judgment as to whether they are favorable or adverse. Those impacts shown as favorable or adverse are either described as a comparison between alternatives or it is believed most people would agree with the classification. Refer to Table 7 on page 119, for a summary of expected impacts by Alternatives.

AIR

Disposal of logging slash by burning would have the greatest foreseeable impact on air quality. Other sources of air pollution would be logging and road building equipment and other engine exhausts. Also, rock crushing equipment and vehicles would create dust during operation in dry weather.

FAVORABLE EFFECTS

The effect on air quality would be less detrimental under the Proposed Action than Alternative Nos. 3, 4, or 5 because less logging slash would be disposed of by burning.

The potential for wildfires to become large would be less than under Alternative No. 2 because the more miles of roads would allow more efficient access for fire control. This should result in less smoke during the dry summer months.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Typically about 550 acres of slash will be disposed of by burning each year in this Planning Unit. This will amount to burning approximately 137,500 tons of wood residue. Smoke created in slash disposal is frequently heavy locally. Numerous harvest areas on both government and private lands send large quantities of smoke into the air. Collectively, these large volumes of smoke can obscure the sun many miles away when weather conditions do not allow it to dissipate rapidly.

According to the Southwest Washington Air Pollution Control Authority smoke generated in slash burning does have adverse effects. These are more in the form of a general nuisance rather than a health hazard. The Authority does have documented cases of soot particles damaging or soiling the exterior of buildings, draperies, and washing hung out-of-doors. SWAPCA also suspects that slash smoke can have an adverse effect on the health of some portions of the population, although they have no documentation of such effects. These effects would be caused by suspended particulate material rather than chemicals in the smoke.

In order to mitigate the effects of slash burning on local populations, the Forest Service has entered into a cooperative agreement with the Washington State Department of Natural Resources, Washington State Department of Ecology and the Oregon State Department of Environmental Quality. The purpose of this agreement is to regulate the amount of smoke produced in slash burning, primarily to reduce its impact on air quality over population centers.

As a result of its impact upon air quality, a number of alternatives to normal broadcast burning of slash are being investigated. Some of the alternatives being used in this Planning Unit are:

1. Piling of the slash so that it can be burned when weather conditions are better suited for smoke dispersion.
2. Burning in the spring when wind and weather conditions are more favorable for smoke dispersion. In addition, less of the slash is burned during the spring.
3. Scattering or spreading of the slash to reduce hazard concentrations.
4. Physical removal of wood fiber as a result of improving utilization standards. This would result in material being removed that was previously not considered usable due to small size, species, or other economic reasons.

The amount of slash disposal by burning will probably be reduced in time, but at least for the foreseeable future burning will remain a significant tool for the fire manager.

Other sources of air pollution will be logging and road building equipment and other engine exhausts. Rock crushing equipment and vehicles will create dust during operation in dry weather. These should create only negligible and temporary impacts on air quality.

FIRE

One of the most significant problems in fire management is the accumulation of fuels, particularly logging slash on timber harvest areas. Another important impact is the potential for increased fire occurrence as access to the Planning Unit is improved and more people use the area.

FAVORABLE EFFECTS

In addition to providing better access than under Alternative No. 2 the more fully developed road system will act as firebreaks. The roads also would allow intensive management over more area than Alternative No. 2 thus allowing greater reduction of the natural

fuel buildup usually found in unmanaged stands. More vegetative manipulation for firebreaks would also be possible. Fewer fires should occur than under Alternative No. 2 since fewer people would be expected to use the Planning Unit.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

One of the most significant problems in fire management is the accumulation of fuels, particularly logging slash on timber harvest areas. Another important impact is the potential for increased fire occurrences as access to the Planning Unit is improved and more people use the area. Historically, recreation users have been the major cause of fires starting, while timber harvest has resulted in the most destructive ones. As described under Environmental Impacts on Air, several alternatives for abatement of the slash hazard are being used and others are being considered. In the case of recreation and other man-caused fires, continuing and improved public education and awareness should help reduce the number of fire occurrences. In some cases of extremely hazardous conditions, all or portions of the Planning Unit may be closed to the public. Timber harvesting provides fuels for lightning caused fires as well as those caused by man. In either case there is a need to adequately dispose of this fuel as promptly as possible.

A factor now becoming more widely recognized is the knowledge that in the past virtually every acre of forest land has been subjected to wildfire, usually a number of times. As successive generations of trees grow and deteriorate, they litter the ground with rotting woody material and leave dead trees standing like lightning rods. As periodic fires occurred, they tended to cleanse the area of these natural fuels, thus reducing the hazard and providing a clean seed-bed from which a young vigorous forest has grown. If the goal of eliminating or reducing wildfire within the Planning Unit is successful it would increase the natural fire hazard as more and more natural debris accumulates. The natural hazard is now very high in many parts of the Planning Unit. Timber harvest followed by adequate slash disposal is one way of reducing the hazard and protecting the forest from wildfire.

HISTORICAL AND ARCHAEOLOGICAL

The Proposed Action would not result in the alteration of any site seemingly with characteristics for future nomination to the National Register of Historic Places.

LAND OWNERSHIP AND STATUS - MINERALS AND ENERGY

Since no activities are specifically proposed, it is not possible to discuss impacts in detail. At the time such projects are proposed, Environmental Analysis Reports or Environmental Statements would be prepared as needed.

NOISE

Road construction, timber harvest, and associated heavy vehicle use of roads would create noise that could be audible for several miles. Additional miles of roads would lead to increased use by recreation vehicles, including motor bikes and snowmobiles.

FAVORABLE EFFECTS

Noise is usually negative in any alternative. However, it would be less detrimental under the Proposed Action than under Alternatives No. 3, 4, or 5 because of less road construction and timber harvest.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Noise could be mitigated to some extent by such measures as improved muffler systems on chain saws, trucks, and other equipment.

SOCIAL AND ECONOMIC

It is anticipated that the current social and economic trends mentioned under the Description of the Planning Unit will continue. It is also expected that Land Use Alternative No. 1, in itself, would have a negligible effect on social and economic characteristics at the sub-regional, regional, and national levels.

Timber harvest from the Clear Creek Planning Unit is expected to have a measurable impact upon the communities of Stevenson, Amboy, Chelatchie, Woodland, Randle, and Packwood, Washington, and Cascade Locks, Oregon. Recreation within the Planning Unit would produce significant impacts upon the towns of Amboy, Woodland, and Cougar, Washington. Timber harvesting and recreation visitors will have much greater impacts upon these dependent communities than they would on more distant metropolitan areas such as Portland, Oregon. For instance, the timber harvested from a particular Planning Unit may constitute a large percentage of the raw material needed by mills in nearby communities, while the same volume of timber would be almost insignificant in a diverse marketing center the size of Portland. Impacts upon these communities as a group under this Alternative would include a reduction in the number of timber related job opportunities, compared to the level today. At the same time the number of recreation associated jobs should tend to increase. Such changes would affect the local tax base and various services performed by these local governments, including police and fire protection, water and other utilities, health services, and public education. The net effect upon these communities through changes in resource allocation of a single Planning Unit is difficult to determine. They are affected by resource output from several Planning Units on the Gifford Pinchot National Forest, as well as those from lands owned by the State and a number of private parties. Many factors, including the nations economic health combine to create continuing changes in the management of lands in all ownerships.

Timber harvesting would represent the most significant commodity output from this Planning Unit in the foreseeable future.

Improvements in forest fire prevention and suppression may have the effect of reducing the overall acreage in meadows, berryfields, and other open areas, many of which were created as the result of wildfires. Most of these areas are now being slowly reclaimed by invasions of tree species and may produce commercial timber crops in the future.

Timber harvest and road construction would provide access to presently undeveloped areas, allowing more intensive management such as harvest of dead and dying trees and thinning of timber stands.

Timber management would be limited in some instances for protection of specific wildlife habitat, water quality, soils, visual values, etc.

Roads would remove land from timber production, as well as from other uses.

The Forest Service would acquire private lands in the Planning Unit as needed and the opportunity allows.

The option of committing 9,410 acres of Scenic, Unroaded and Developed Recreation areas to commodity production would be retained for the future.

Water for domestic and fish use would be provided to the Lewis and Columbia Rivers.

The Proposed Action would continue to contribute to both the recreation and timber aspects of the local economy. Following are some projected outputs as a result of the Proposed Action:

Timber Harvest

Sawtimber(1)	24.2 MM bd.ft./Year
Return to the Federal Treasury(2)	\$2,522,850/Year
25% Funds to the counties(3)	\$ 840,950
Jobs Provided - Wood Industry(4)	266
Payroll/employee in primary mfr.(5)	\$ 11,560
Total payroll in primary mfr.	\$3,074,960
Value added/employee in primary mfr.(6)	\$ 14,000
Total value added in primary mfr.	\$3,724,000
Jobs provided - Secondary Industries and Services	744

Recreation

	<u>Visitor Days/Yr.(7)</u>
Camping - Developed sites for trailers, campers, etc.	21,400
Picnicking	14,000
Hiking and Riding	39,300
Winter Sports	18,700
Hunting	13,900
Fishing	11,200
Scenic Driving by Car	18,700
Berry Picking	105,000

Based upon the level of financing received by the Gifford Pinchot National Forest for Fiscal Year 1976 the annual administrative cost of implementing this alternative would be about \$1,224,900(8). This level of funding is not necessarily adequate to provide a high quality of management for all resources. Historically timber management has received a proportionately larger share of requested financing than some of the other resources.

- (1) Based upon a level of management including commercial and precommercial thinning, reforestation of all nonstocked areas and planting of genetically superior stock on all accessible areas.
- (2) Based upon actual bid prices for timber sold on the Gifford Pinchot National Forest in Calendar Year 1974.
- (3) Paid to the counties in which the timber is harvested in lieu of taxes. Based upon (2) above.
- (4) Source: U.S. Forest Service, Pacific Northwest Forest and Range Experiment Station, 1975, Research Paper PNW-189. Sawtimber, Veneer and Plywood Sector only.
- (5) Source: Washington State Employment Security Department, Employment And Payrolls in Washington State, No. 113, Fourth Quarter, 1974.
- (6) Source: Annual Census of Manufactures, 197, U.S. Dept. of Commerce, Bureau of the Census.
- (7) Figures represent carrying capacities, not expected demand. Source: National Forest Recreation Survey, 1960.
- (8) Assumes maximum output, or carrying capacity, for each resource.

This alternative is not expected to have significant impacts on civil rights, minority groups, low income persons or rural poverty. USDA policy does not permit discrimination because of race, color, national origin, sex, or religion. Any person who believes he or she has been discriminated against in any USDA related activity should write immediately to the Secretary of Agriculture, Washington, D.C. 20250.

FAVORABLE EFFECTS

Timber harvesting would represent the most significant commodity output from this Planning Unit in the foreseeable future. Land Use Alternative No. 1 would cause certain impacts upon timber management, which in turn may result in social and economic effects locally. One intent of the Forest's Timber Management Plan 1975-1984 is to work toward harvesting of all stands eventually at rotation age. During the next 60 to 80 years the percentage of large overmature trees will decrease, except where timber harvest is limited or restricted by other resource needs. Removal of overmature stands will tend to increase the amount of wood fiber grown on these acres, as the young stands to be replanted will be healthier and grow faster than the old diseased and decadent stands they replace. The younger trees will be less susceptible to the depredations of insects and diseases.

Timber harvest and road construction would provide access to presently undeveloped areas, allowing more intensive management such as harvest of dead and dying trees and thinning of timber stands. Presently, this type of material cannot economically be placed on the market.

Certain limitations would be placed upon timber management for protection of specific wildlife habitat, water quality, soils, cultural and visual values. Such limitations would be required in the following areas under this Alternative:

1. Class I and II Streamside Management Units.
2. The Unroaded Area north of Road No. 100.
3. Wildlife buffer strips around lakes and meadows, and in the elk calving area.
4. Where soil protection limits road location, or requires sophisticated logging methods keeping the log free of the ground.
5. Most areas of Visual Quality-Retention Standard and some areas of Partial-Retention Standard.

The Proposed Action would continue to contribute to both the recreation and timber aspects of the local economy. The Planning Unit is within a three hour drive from the Portland, Oregon/Vancouver, Washington metropolitan area. The economy of local

communities and Skamania County is expected to continue to be highly dependent on the wood industry, and on the National Forests for raw material.

Timber harvested from the Clear Creek Planning Unit is expected to have a measurable impact upon the communities of Stevenson, Amboy, Chelatchie, Woodland, Randle, and Packwood, Washington, and Cascade Locks, Oregon. Primary manufacturing plants are located in these local areas. Recreation within the Planning Unit is difficult to measure in terms of economic impacts, but it would produce significant impacts upon the towns of Woodland and Cougar, Washington. Annually, a large number of hunters use the town of Cougar, population less than 200, as a jumping off place during the elk season.

Water of a high quality for domestic, industrial, and agricultural use, and to benefit fish populations, would be provided to the Lewis and Columbia Rivers.

Public acquisition of private lands within the Planning Unit would result in lower costs for land management. The need for fewer miles of road construction would mean less soil erosion, air and water pollution. In addition, the number of miles of property lines would be reduced by 15 miles. No firm proposal for the exchange of these lands has been made at this time.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Certain logging methods such as high lead and tractor typically require more miles of road construction than do long-span skyline, balloon, and helicopter. Roads themselves remove land from timber production, as well as from other uses such as wildlife habitat.

Limitations placed upon timber management for protection of other resource values may require:

1. Less than full timber yield resulting in an extension of the normal rotation age.
2. Use of sophisticated logging methods such as skyline, balloon, and helicopter.
3. Timber harvest in some remote areas would be delayed until suitable logging methods are available to provide the necessary protection to other resources, or until logging by skyline, balloon, or helicopter becomes more economical in those areas.

These limitations would result in increased dollar costs for preparation of timber sale contracts and administration of those contracts, as well as for road construction, logging, reforestation, and slash disposal. These increased costs would mean less funds would be available to State and Federal governments. Such limitations also mean less timber would be harvested on some areas

in the long run than was normal in the past. Increased budget appropriations would help to offset these reductions by allowing for more intensive timber management practices to increase the timber growth, particularly on the better growing sites where limitations imposed by other resources are minimal.

SOILS

Some surface disturbance would occur as a result of road construction, timber harvest, recreation facility development, and other activities. The probability for mass soil movement may also increase due to some of these activities.

FAVORABLE EFFECTS

Soil impacts are expected to be less detrimental than for Alternative Nos. 3, 4, and 5 because of a combination of fewer acres to be logged, and miles of road to be built. Less soil compaction should result in and around developed recreation areas used by people than under Alternative No. 2 since fewer recreationists are expected to use the Planning Unit.

Most tree species benefit from some disturbance of the surface, as this allows the seed to reach the soils for germination. Mixing of the organic litter with the surface soils tends to cause more rapid decomposition, making nutrients more available for the young trees.

The potential for soil damage from slash disposal is less in Alternative No. 1 than Alternative Nos. 3, 4, or 5.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Some loss of soil nutrients, organic matter, and reduction in microscopic plant and animal life necessary to the soil building process, can be expected from logging and subsequent slash disposal where large areas of soil are disturbed. The total effects of these losses are unknown. Nutrient losses can be offset by use of fertilizers or soil amendments. Organic matter, along with the microflora and microfauna, when reduced, are slow to return to their original level and must depend upon natural processes for replenishment.

Land management activities would have the potential to accelerate soil movement and stream turbidity. Roads, and to a somewhat lesser extent timber harvesting, would have the greatest potential for increasing the normal rates of soil movement. This potential varies with such factors as the characteristics of the soil itself, steepness of slope, and climate.

Removal of the vegetation increases drying of the surface soils, particularly during the dry summer months. This can have an adverse effect upon tree regeneration, depending upon location, soil

depth, aspect and elevation. Soils susceptible to this are identified in the Soil Resource Inventory. Timber harvesting on these soils would be by methods other than clearcutting.

Soil compaction can result from use of heavy equipment such as logging tractors. This can cause decreased water infiltration, increased surface runoff, erosion and reduced aeration of roots. This impact can be minimized by scarification of landings and skidtrails after use.

The Soils Resource Inventory and field examination have identified those areas where the soils are so sensitive to movement and compaction that they prohibit or limit road construction, timber harvest, or recreation development. No activities would take place in these areas until techniques are developed which would reduce accelerated soil damage to an acceptable level. The use of existing erosion control techniques can control soil movement on most areas in the Planning Unit at an acceptable level. Some soil areas would require more sophisticated location and construction methods than are normally used today.

Some specific precautions required in timber harvesting, road construction, and other activities are: drainage ditches or water-bars on skid trails, temporary roads and landings, use of proper stream crossings and removal of debris in streams.

THREATENED AND ENDANGERED PLANTS AND WILDLIFE

Management activities, particularly timber harvesting and road construction, may disturb these plants or alter wildlife habitat needed by these species, before their presence within the Planning Unit is known.

FAVORABLE EFFECTS

The potential for adversely affecting these plants or wildlife habitat is less than under Alternative Nos. 3, 4, or 5 due to less timber harvesting and related activities.

VEGETATION

Species composition and age would be changed as a result of timber harvest and reforestation. Also, the mean age and tree size of the timber stands would be reduced as the old growth timber is liquidated. In most cases, harvesting would result in even-aged stands from the time they are harvested and replanted, until they are harvested again. Old growth timber stands would gradually disappear under intensive management, except in areas where timber harvesting is not programmed.

In some instances there is a potential for a timber harvest area to become a brushfield before a new stand of trees can be established.

FAVORABLE EFFECTS

Plant communities are slowly but constantly changing in the natural state. New stands replace the old as they are burned over or simply die out due to old age. Alternative No. 1, particularly the proposed timber harvesting and related roads, would accelerate changes in vegetative types and in some cases alter the direction of these changes. As a result of timber harvest and reforestation, species changes would be made occasionally to provide better resistance to insects and diseases, to improve chances for regeneration, or to provide for increased fiber production.

In most cases harvesting would result in even-aged stands from the time they are harvested and replanted, until they are harvested again.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

On some sites there is a potential for a timber harvest area to become a brushfield before a new stand of trees can be established. Properly designed and monitored herbicide spraying projects are effective in combating brush encroachment. These projects are preceded by an Environmental Statement. The most recent Final Environment covering the Gifford Pinchot National Forest was filed with the Council on Environmental Quality February 13, 1976.

Large amounts of logging debris, or slash, in the form of rotten logs and limbs, may be a serious fire hazard to surrounding vegetation if not promptly abated by burning or removal by other means.

VISUAL

Timber harvesting, particularly clearcutting, roads and other management activities would have a considerable impact upon what the eye sees, or the visual setting. These impacts would primarily be due to openings created in the vegetation as a result of timber harvesting and road construction.

WATER

The potential for stream siltation from management activities such as timber harvest, road location and similar developments, represents the most serious threat to water quality.

Water temperatures could be increased by removal of shading vegetation along streams, through timber harvest, and road construction.

Chemicals such as insecticides, herbicides, and fertilizers, when used near water courses, could directly affect water quality.

Additional people would be another potential impact on water quality, due to the accumulation of litter and other wastes.

The most significant potential for affecting the quantity of water produced by the Planning Unit is that of vegetative manipulation in timber harvesting. The quantity of water produced would have the potential to increase as intensive timber management practices, particularly clearcutting, are applied to new areas. According to recent Forest Service studies the removal of vegetative cover by timber harvesting reduces the amount of moisture lost through transpiration. Also, clearcut harvest areas tend to store more snow than timbered areas since there is little or no vegetation to intercept it. This is also true to some extent for rainfall. While additional water quantity is believed to be a net favorable impact, most of the added water would leave the Planning Unit as runoff during the wet, rainy season and possibly would increase erosion and stream bank damage. Such effects would then be adverse.

FAVORABLE EFFECTS

Impacts on water quality are potentially less detrimental than under Alternatives No. 3, 4, or 5 as a result of less timber harvest, road building, and slash disposal. Impacts as a result of use by people is expected to be less under the Proposed Action than any of the other alternatives. Many more people are expected to use the area under Alternative No. 2 while Alternatives No. 3, 4, and 5 would probably allow better access to streams and lakes as a result of more miles of road and more emphasis on timber removal than the Proposed Action.

Properly designed cutting areas can be a benefit by storing increased amounts of snowfall, which would tend to increase the streamflows during the early summer months. Major manipulations of the vegetation for the purpose of increasing water quantity are not planned for the foreseeable future.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

The potential for stream siltation as the result of improper erosion control measures applied to timber harvest, road location, and similar developments, represents the most serious threat to water quality. Of these, road location is the most significant. Siltation can be controlled, or greatly reduced, using the erosion control practices described in the preceding discussion on soils. Even with the best of these preventive measures, however, some siltation would occur. The amount should be small and the effect should be short-lived.

Another potential impact on water quality, which is increasing with the number of people using the area, is that of litter and other wastes. This would be particularly noticeable in and adjacent to developed recreation sites such as campgrounds. However, the same situations are expected to increase along fishing streams and around lakes, even in remote areas such as the Shark Rock Scenic Area.

Without proper controls, the situation around the higher elevation scenic lakes will continue to deteriorate as more and more people, many with horses, want to camp in the most scenic spots close to the water's edge. Care would be used in locating campgrounds and other sites which would tend to concentrate people away from the water's edge. In the case of remote lakes, where people have in the past been free to camp wherever they wished, "No Camping" buffer strips would be posted as needed. Areas for tethering horses would be adequately separated from both the water and camping areas.

Water temperatures can be increased by removal of shading vegetation along streams, through timber harvest, and road construction. Methods of operation would be modified within buffer zones, around lakes and specific streams⁽¹⁾ to maintain water temperature, protect the stream or lakeside environment, and allow filtration of sediment from surface waters. Areas where shading vegetation is removed for any reason would be revegetated promptly. Roads would be located away from streams whenever possible.

Chemicals such as insecticides, herbicides, and fertilizers, when used near water courses, could directly affect water quality. This might be caused by wind drift from spraying, spillage, or washing into streams and lakes by surface or subsurface flows. All proposals for the use of pesticides, except for small applications, as around buildings, require an Environmental Statement fully explaining the project and the specific measures to be taken to protect the environment. No chemicals would be sprayed near water courses or deposited where they are likely to be washed into a stream or lake. Sprays would not be applied when wind conditions could cause them to drift out of the area to be treated.

Another significant activity with a potential for affecting the quality of water produced by the Planning Unit is that of vegetative manipulation in timber harvesting, particularly by clearcutting. Peak streamflows could be increased significantly if large portions of watershed are cutover at one time. Such increases could produce minor flooding along forest streams, resulting in increased stream-bank erosion and vegetative damage. Harvesting of such large areas within a drainage is not envisioned in this alternative.

Use of the best available methods to avoid degradation of water quality should insure that this alternative will not cause a significant adverse impact on the water resource. The water quality monitoring program described under Water on page 23 would be a significant tool for use in maintaining water quality.

(1) Refer to Glossary, Streamside Management Units.

WILDERNESS

The following impacts would result if Alternative No. 1 were fully implemented. However, as indicated under Wilderness on page 42 no management activities would take place which would remove RARE Areas No. 304, 308, 309, or 344 from Wilderness consideration until decisions are made for the adjacent Roadless Areas outside the Planning Unit.

None of the existing Inventoried Roadless and Undeveloped Areas would be considered for Wilderness Study under this alternative.

The activities proposed by this alternative would not affect the Wilderness characteristics of Roadless Areas outside the Planning Unit, except in the case of the Cussed Hollow Area. However, some reduction in the quality of isolation could be expected as a result of any reduction in size of a Roadless Area.

UPPER GREEN, NO. 304 and META LAKE, NO. 344

Sanitation and salvage logging would occur within 1,020 acres of the Upper Green Area and 340 acres of the Meta Lake Area. Although the impact would be relatively slight, this would gradually remove these areas from consideration for Wilderness. Because of present stand conditions timber harvesting would occur as soon as technology and economics allow the timber to be removed without unacceptable impacts on other resources. The remaining 2,780 acres of the Upper Green Area, and 330 acres of the Meta Lake Area, outside the Planning Unit would still meet the minimum size requirement since they are adjacent to other Roadless Areas.

CLEAR CREEK, NO. 308 AND CUSSED HOLLOW, NO. 334

Timber harvesting and related activities would take place within 4,690 acres of the Clear Creek Area located outside the proposed Unroaded Area and the addition to the Shark Rock Scenic Area. These activities would also occur in the Cussed Hollow Area, except for 1,410 acres outside the Clear Creek Planning Unit. This would reduce the Cussed Hollow Area to less than the minimum size of 5,000 acres. Such activities would remove these areas from Wilderness consideration within the next ten years.

SHARK ROCK, NO. 309

Management of the Shark Rock Scenic Area envisions removal of timber to protect adjacent resources. Because the timber values are low and recreation values are high, such salvage operations may never occur. However, the need to protect adjacent timber stands dictates leaving open the possibility of salvage operations which may gradually remove the Shark Rock Area, within the Planning Unit, from Wilderness consideration. That part of the Shark Rock Area outside the Clear Creek Planning Unit would still meet the minimum size requirement since it is adjacent to other Roadless Areas.

WILDLIFE

The various wildlife species are directly related to the different habitats found in the Planning Unit. Any proposal to alter these habitats will affect wildlife to some degree. No detailed survey of existing wildlife species has been made for the Clear Creek Planning Unit and the Forest Service does not know exactly what effect proposed management activities would have on each wildlife species. The Forest Service believes this alternative would provide enough varied habitat to maintain viable populations of all species now present.

Timber harvesting along with other management such as protection of old growth and mature conifers, stream protection, buffer strips around lakes and meadows, and the Nonforest/Unproductive land class would insure that a wide range of wildlife habitat will be available.

As the amount of overmature timber is reduced, the number of snags and dead-topped trees would decline. However, snags are acknowledged to be an important part of the forest ecosystem. Dead and defective trees are used by a great variety of wildlife species for nesting, denning, perching, roosting, feeding, and cover. At least 43 species of birds and 11 species of mammals are totally or heavily dependent on dead and defective trees in Washington and Oregon. A recently implemented Forest Service Region 6 policy concerning snags is intended to "Provide habitat to maintain self-sustaining populations of snag-dependent wildlife species on a National Forest basis." Refer to Appendix, page 177.

Logging slash left on the ground provides good cover and protection for many small animals and birds.

Road and other construction projects would remove a certain amount of the Planning Unit from wildlife habitat. Roads would remove about five acres per mile in this Planning Unit.

FAVORABLE EFFECTS

Timber harvesting will ensure that a variety of habitat types will exist. Harvest areas would provide grasses, low brush, berries and similar vegetation for several years before the new timber stand crowds these plants out. Such areas are similar in wildlife food production to meadow areas which are being eliminated in many cases by invading tree species as previously discussed. Recently harvested areas favor such species as rabbits, grouse, bear, deer, elk, some birds, and others requiring this type of habitat. Wildfires tend to produce the same effects on wildlife habitat as described for timber harvesting. In some instances these hardwood brush species compete with the newly planted young trees for available sunlight, moisture, and other elements needed for maximum tree growth. Herbicide spraying would be used to control this brush as needed. Such spraying would not eliminate the benefits of this habitat. Herbicides would not be used on all harvested areas. Even on those areas on which it is used, most of the brush would not be eradicated. From past experience only the newer growth on individual plants is usually killed, the following year

these plants continue growing. The objective would be to slow the brush growth until the desirable young trees are able to outgrow the brush. Many of the common brush species found in timber harvest areas tend to sprout near the ground line after spraying, thus increasing the low browse and cover available.

Most wildlife species are favored by the "edge effect" produced by timber harvesting. This effect tends to provide abundant food on the one hand while also providing nearby cover for escape. More old growth and mature conifer habitat would be retained than in Alternatives No. 3, 4, and 5. This habitat is required by such species as the spotted owl and red backed mouse. This habitat would be found in areas where timber harvesting would be limited because of resource values other than wildlife.

Logging slash left on the ground provides good cover and protection for many small mammals and birds. Even though the objective of fuels management is to reduce the fire hazard of logging slash by burning or other means, as soon as possible after logging is completed, there is a time lag of up to one year in some instances before the slash is burned. There is also some slash that is not burned, particularly around the edges of timber harvest areas, in creek bottoms, and other moist areas. This remaining slash provides cover for the small mammals and birds.

Winter range is usually the most limiting single factor in determining the deer and elk herd size on the Gifford Pinchot National Forest. Most significant winter range is located at the lower elevations on private or other public lands surrounding the Gifford Pinchot National Forest. On the other hand the Forest has surplus deer and elk summer range at all elevations.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

As noted under Vegetation, the existing habitats are undergoing change through the natural succession of plants and such forces as wildfires. Alternative No. 1 would alter some habitats rapidly, primarily through timber harvesting. These changes would cause at least temporary reductions or relocations in the populations of those species dependent on the vegetative types that are removed, while at the same time benefiting other species. There is a probability that as the amount of overmature timber is reduced the number of snags and dead-topped trees will decline. This may cause a significant loss in numbers of those species highly dependent on dead trees for den or nesting purposes including flying squirrels, chickaree, certain owls, and osprey.

Herbicides used to control brush along roads and in timber harvest areas could have an adverse impact upon wildlife mostly through alterations of habitat and food sources. Such impacts should be negligible under this alternative. Proposals for the use of herbicides require an Environmental Statement fully explaining the project and the specific measures to be taken to protect the

environment. The most recent Final Environmental Statement covering the Gifford Pinchot National Forest was filed with the Council on Environmental Quality February 13, 1976.

Timber harvesting and road construction could alter aquatic habitats by removing riparian vegetation and silting of stream beds. The management of wildlife buffer strips around lakes, stream protection under Streamside Management Units and the Fish Habitat Management Policy should mitigate these potential impacts.

Roads and other construction projects would remove a certain amount of the Planning Unit from wildlife habitat. Revegetation of bare soil areas created by road construction and other activities is a common tool used to reduce erosion. The seed mixture used for this revegetation work is formulated to include plants which are used by wildlife. This revegetation and reduction of erosion is also effective in reducing the impact on the fisheries resource caused by siltation.

Harassment of wildlife can be a problem under certain conditions. For instance, snowmobiles could unduly disturb elk during the winter when the animals are congregated in deep snow, or trail bikes could disturb them during the spring calving season. Also, it is possible that roads may attract large numbers of people to an area to the detriment of the wildlife. Other resource activities, such as logging and road construction, can also disturb wildlife. These impacts can be minimized by limiting access and management activities during critical periods.

III. ALTERNATIVES TO THE PROPOSED ACTION

Three additional Land Use Alternatives were considered as possible alternatives to the Proposed Action. For comparison purposes a fifth alternative, that of continuing management under the current Ranger District Multiple Use Plan, is included. This current plan, illustrated by Alternative No. 5 below, is considered to be too general in nature to be an adequate planning tool for the future.

Alternative No. 2 emphasizes nonintensive management. Here the focus is on Wilderness preservation of those areas identified as Inventoried Roadless and Undeveloped Areas in the Roadless Area Review. Refer to map on page 189.

Alternative No. 3 represents a mixture of uses and activities. It reserves the more scenic and rugged portions of the Clear Creek and Lewis River canyons for management in an Unroaded Status while obtaining full production of tangible commodities over most of the remainder of the Planning Unit.

Alternative No. 4 maximizes the production of tangible commodities, particularly wood fiber, while retaining only the present Shark Rock Scenic Area in an undeveloped state for dispersed-unroaded recreation purposes.

Alternative No. 5 presents the current management direction for the Planning Unit. It is based on a portion of the Ranger District Multiple Use Plan written in 1971. Because the 1971 Multiple Use Plan was developed using different criteria, the map illustrating Alternative No. 5 uses different symbols than those used for Alternatives 1 through 4.

For instance, the Forest Service has recently adopted the Visual Resource Management System as an aid in prescribing acceptable management practices in areas of various scenic qualities. Also, the Forest's Soil Resource Inventory describes soil characteristics in a different format than was available when the Multiple Use Plan was made. These and other changes make it impossible to directly compare Alternative No. 5 with the others shown here. Therefore, this Alternative is presented in the format used in the Multiple Use Plan.

While public input was considered in developing all five Land Use Alternatives, Nos. 2, 3, and 4 were developed specifically from this source. These three Alternatives illustrate the wide range of resource uses suggested by the public to date.

The four alternatives presented here are not the only ones which could be drawn. It is entirely possible that particular features of each could be rotated among them to produce others. In addition, entirely new alternatives could be drafted. However, those alternatives shown here are believed to represent, as fully as possible, the reasonable management options available to the Forest Service.

A. LAND USE ALTERNATIVE NO. 2 - WILDERNESS AND RECREATION

Wilderness and various types of recreation are illustrated by this alternative. Selection of this alternative, or any Land Use Alternative proposing Wilderness Study, would not automatically establish the area(s) as Wilderness. The intent is to illustrate Wilderness as an alternate form of management. If Alternative No. 2 is selected for implementation those areas proposed for Wilderness Study would then require a more indepth study to evaluate their Wilderness characteristics and values. A recommendation for Wilderness could then be made to Congress, which then would act upon the recommendation.

A summary of the more significant aspects of this proposal follows:

1. Timber Management would be the key use over most of the Planning Unit. In addition, management of this area would include a variety of uses such as dispersed-roaded recreation, watershed, and wildlife.
2. All Roadless and Undeveloped Areas in this Planning Unit and any Additionally Identified Areas would be allocated to study for possible addition to the National Wilderness Preservation System.
3. Those areas suitable and needed for recreation site development, such as campgrounds and picnic sites, would be used for those purposes to maximize recreation use.
4. Those portions of the Planning Unit visible from the Lewis River, adjacent to Road No. N90 and Trail No. 31, would be managed basically for recreation and scenic qualities.
5. The visual qualities of the area would be considered in all proposed management activities.⁽¹⁾
6. The quality of certain specific wildlife habitats would be protected. These areas would be managed as Key Wildlife Habitat.
7. Soil values would be considered in all management activities.
8. All streams would be managed to maintain water quality standards.⁽²⁾
9. The area north of Road No. 100, approximately from Independence Pass to Meta Lake, would be managed in an Unroaded status basically for dispersed-unroaded recreation.

(1) Refer to Visual Resource Management System in the Glossary.

(2) Refer to Streamside Management Units in Glossary.



A variation of this alternative would be to manage the proposed Wilderness Study Areas in an Unroaded status. The impact of this variation on other resources would not be much different than the impact of Wilderness. It would, however, mean these areas would be managed more intensively to provide dispersed-unroaded recreation benefits to greater numbers of people than would be probable under the Wilderness designation.

Rationale: A major consideration should be preservation for Wilderness. The Planning Unit includes 18,030 acres identified by the Roadless Area Review as meeting the criteria for Wilderness Study. The Planning Unit also contains 5,880 acres suitable for recreation site development and about 20,000 acres of high quality scenic areas. The Shark Rock Area is a significant scenic and dispersed-unroaded recreation area. There will be an increasing demand for all forms of outdoor recreation.

TABLE 2 ALTERNATIVE NO. 2 - ACRES BY MANAGEMENT AREA

Management Area	Acres
Shark Rock Scenic	None
Water Quality Protection	(45 miles)
Nonforest/Unproductive	2,000
Wilderness Study	18,030
Unroaded Area	280
Key Wildlife Habitat	8,520
Developed Recreation	190
Timber Management	45,600
Private Ownership	1,900
Total Acres in Planning Unit	76,520

MANAGEMENT DIRECTION

Specific management direction for Land Use Alternative No. 2, and the expected outputs to be produced as a result, are as follows. To avoid repetition, these items will be discussed from the standpoint of their similarity to the same items discussed under the Proposed Action - Land Use Alternative No. 1. Those portions which are substantially the same as in Alternative No. 1 will not be repeated, while differences between the alternatives will be discussed in detail. This will also apply to the Environmental Impacts to be discussed for each alternative to the Proposed Action:

DOMESTIC RANGE

It is estimated that about 850 acres of suitable transitory range would be available at any given time in the Planning Unit. As in Alternative No. 1, no grazing of domestic livestock would be planned for the Clear Creek Planning Unit.

FIRE MANAGEMENT

In case of fire within the Wildernesses, protection of the Wilderness values would be considered in determining what control methods would be used. Fire control objectives would be the same in the Wildernesses as in the remainder of the Planning Unit, i.e. minimum size, control by 10:00 a.m., etc.

HISTORICAL AND ARCHAEOLOGICAL

This item is the same as under Alternative No. 1.

LAND OWNERSHIP AND STATUS

This item is the same as under Alternative No. 1.

MINERALS AND ENERGY

Mining claims may be filed within Wilderness until January 1, 1984. Claims filed prior to that date may be operated provided they meet the requirements of the mining laws of the United States, and the Wilderness Act, which describes how exploration and mining may be carried out within Wilderness.

RECREATION

One area is proposed for management in an Unroaded status. This area, 280 acres in size, is located north of Road No. 100. It is a relatively narrow strip adjacent to the Meta Lake Roadless Area.

Of the 5,880 acres suitable for developed recreation sites, based upon suitable soils and slopes of less than 11 percent, approximately 190 acres are considered to be suitable and needed for development under this alternative. These specific sites were selected based upon such factors as their ability to withstand heavy use, nearby water bodies, scenic attractiveness, and nearby points of interest. As with trails, developed sites were selected which would not tend to impose undue recreation pressures on the proposed Wilderness. In the event these Wildernesses were managed instead in an Unroaded status, basically for dispersed-unroaded recreation, it is probable that additional developed recreation sites and trails within the Unroaded areas would result. This alternative would furnish a potential of 470 family camp units and 135 picnic units if all 190 acres were fully utilized.

The Shark Rock Scenic Area would be discontinued as the area would be allocated to Wilderness Study.

The management direction in Alternative No. 1 for the Lewis River corridor would apply to this alternative also, except within the area designated as Wilderness Study.

ROADS AND TRAILS

This alternative would result in approximately 45 to 55 miles of new road construction. Most of these would be built for the purpose of timber harvest, however, a significant number of road miles would be designed to serve recreation by providing scenic drives, and access to recreation sites such as campgrounds and trailheads. For the safety of large numbers of recreationists, many of these roads would be built to a higher standard than those in Alternative No. 1. In addition, some of the existing roads would be improved to accommodate these users.

Between 30 and 40 miles of new trails would be required. Many of these would be built to provide short loop trails from developed recreation sites to nearby points of interest.

SOILS

Under this alternative there are 9,260 acres on which little or no road construction would be allowed. In addition, there are 9,800 acres on which roads would be limited to the minimum needed to provide access to significant areas in need of management. Timber harvest by suspended logging methods would be required on 10,030 acres.

THREATENED AND ENDANGERED PLANTS AND WILDLIFE

This item is the same as under Alternative No. 1.

TIMBER

Timber would be managed on a full yield basis on 44,840 acres.

No timber harvest would be scheduled within Wilderness Study, or Unroaded areas.

This alternative would provide a potential yield of 25.4 MM board feet annually. The actual annual programmed harvest is expected to be 21.2 MM board Feet.

In recognition of the need to protect other resource values, the following reductions in timber yield within the Special land class would be expected.

Other Resource Constraints	Reduction In Annual Yield (MM bd.ft./Yr.)
Visual Management	2.3
Stream Protection	0.2
Wildlife Habitat	0.1
Wilderness Study	7.7
Total	10.3

These reductions have been reflected in the Potential Yield Level of 25.4 MM Bd.ft. above. The difference of 4.2 MM bd. ft. between Potential Yield and Programmed Yield represents the available intensive management opportunities that are currently not programmed. These benefits are listed in the Potential Yield Statement in the Current Gifford Pinchot National Forest Timber Management Plan.

The Forest Land Classification describes the Planning Unit from a timber management standpoint. Following are the acres by class for Land Use Alternative No. 2:

<u>Class</u>	<u>Acres</u>
Standard	44,720
Special	9,200
Marginal	120
Deferred	15,140
Unregulated	410
Productive Reserved	None
Nonforest/Unproductive	5,030
	<u>76,620</u>

VISUAL

The following acres by Quality Objective have been identified within the areas proposed for timber harvest in Alternative No. 2:

<u>Quality Objective</u>	<u>Acres</u>
Retention	8,670
Partial Retention	38,750
Modification	6,620
	<u>54,040 (1)</u>

As a result of applying visual management, less than full timber yield will be realized on approximately 8,700 acres of the above retention and partial retention areas.

WATER

This item is the same as under Alternative No. 1.

WILDERNESS⁽²⁾

All Roadless and Undeveloped Areas in the Planning Unit, inventoried in the Final Environmental Statement for the Roadless Area Review, would be allocated to study for potential addition to the Wilderness Preservation System. This would include any areas added to the inventory since that time. In the meantime they would be managed to maintain their Wilderness qualities.

(1) All areas from which timber will be harvested on a commercial basis, including certain soils, wildlife habitat, etc. where less than full harvest is anticipated.

(2) Refer to RARE Area descriptions on page 25 and map on page 190.

WILDLIFE

Wildlife habitat within Wilderness would change only through natural succession. However, natural succession would be limited insofar as wildfire is concerned. Wildfires within the entire Planning Unit, including the Wilderness, would be controlled and kept as small as possible.

The Key Habitat shown in this alternative includes approximately 7,760 acres of winter range, 580 acres of buffer strips, and 670 acres in the elk calving area.

This alternative would provide for retaining 9,050 acres of old growth and mature conifer habitat. This would represent about 12 percent of the National Forest land within the Planning Unit. Most of these stands would be in Wilderness Study Areas in Clear Creek, Cussed Hollow Creek, and north of Road No. 100. Small amounts would be found in the Unroaded Area north of Road No. 100, Developed Recreation sites, and the Nonforest/Unproductive land class.

WILD AND SCENIC RIVERS

This item is the same as under Alternative No. 1.

A-1 ENVIRONMENTAL IMPACTS - LAND USE ALTERNATIVE NO. 2

The potential for adverse impact upon such resources as vegetation, soils, water, wildlife and air as a result of tangible commodity removal will be less under this alternative than any of the other alternatives. This is due to the emphasis of Alternative No. 2 on nonintensive management. However, this particular emphasis brings out certain environmental impacts peculiar to the use of the area by large numbers of people.

AIR

FAVORABLE EFFECTS

Less air pollution would be produced than in any of the other alternatives as a result of fewer timber harvest, slash disposal, road construction, and other industrial operations.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Typically about 480 acres of slash would be disposed of by burning each year in this Planning Unit. This would amount to burning approximately 120,000 tons of wood residue.

FIRE

FAVORABLE EFFECTS

Fewer fires should result from industrial operations than under any of the other alternatives. The fires which might occur should be individually less damaging to other resources.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Managing extensive portions of the Planning Unit for dispersed and developed recreation will have the potential for more fires starting than under any of the other alternatives. The primary causes would be careless smokers and leaving campfires unattended.

Fires which occur in Wilderness or Unroaded areas may be expensive to control. Fires in these areas may go undetected for a longer time than if they occurred along a well traveled road. Also, in these undeveloped areas firefighters and their equipment may have to be moved by helicopter, an expensive means of transportation. In Wilderness some time may be lost if less than the most efficient fire fighting methods are used in order to protect Wilderness values. These Wilderness concerns apply particularly to the proposed Wilderness Study areas in this Planning Unit. These areas are mostly heavily timbered and are relatively low in elevation. The potential for a serious fire in such circumstances is much greater than in most of the existing Wildernesses today, which are usually at the higher elevations and support less dense vegetation.

Because of the heavy vegetation and steep topography it is doubtful that wildfires could be contained within the Wilderness boundaries under a "let burn" policy. Therefore, normal fire suppression objectives would apply in these areas. Protection of the wilderness values, however, would be considered in determining what type of control methods would be used. For instance, hand tools and aerial retardants would ordinarily be favored over the use of tractors.

HISTORICAL AND ARCHAEOLOGICAL

This item is the same as under Alternative No. 1.

LAND OWNERSHIP AND STATUS - MINERALS AND ENERGY

These items are the same as under Alternative No. 1.

NOISE

FAVORABLE EFFECTS

Noise impacts are expected to be less detrimental than under any of the other alternatives because of less timber harvest and related development.

SOCIAL AND ECONOMIC

Alternative No. 2 would enhance the recreation aspects of the local economy more than any of the other alternatives, while at the same time placing less emphasis on production of tangible commodities such as timber.

The option of committing 18,500 acres of Wilderness, Developed Recreation, and Unroaded areas to commodity production would be retained for the future.

Following are some projected outputs expected as a result of implementing Land Use Alternative No. 2:

Timber Harvest

Sawtimber ⁽¹⁾	21.2 MM bd.ft./Year
Return to the Federal Treasury ⁽²⁾	\$2,210,100/Year
25% Funds to the counties ⁽³⁾	\$ 736,700
Jobs Provided - Wood Industry ⁽⁴⁾	233
Payroll/employee in primary mfr. ⁽⁵⁾	\$ 11,560
Total payroll in primary mfr.	\$2,693,480
Value added per employee in primary mfr. ⁽⁶⁾	\$ 14,000
Total value added in primary mfr.	\$3,262,000
Jobs provided - Secondary Industries and Services	652

Recreation

	<u>Visitor Days/Year⁽⁷⁾</u>
Camping - Developed sites for trailers, campers, etc.	135,700
Picnicking	29,000
Hiking and Riding	30,600
Winter Sports	15,000
Hunting	11,800
Fishing	11,200
Scenic Driving by Car	15,000
Berry Picking	105,000

Based upon the level of financing received by the Gifford Pinchot National Forest for Fiscal Year 1976 the annual administrative cost of implementing this alternative would be about \$1,231,800⁽⁸⁾. This level of funding is not necessarily adequate to provide a high quality of management for all resources. Historically timber management has received a proportionately larger share of requested financing than some of the other resources.

- (1) Based upon a level of management including commercial thinning, and precommercial thinning, reforestation of all nonstocked areas and planting of genetically superior stock on all accessible areas.
- (2) Based upon actual bid prices for timber sold on the Gifford Pinchot National Forest in Calendar Year 1974.
- (3) Paid to the counties in which timber is harvested in lieu of taxes. Based upon (2) above.
- (4) Source: U.S. Forest Service, Pacific Northwest Forest and Range Experiment Station, 1975, Research Paper PNW-189. Sawtimber, Veneer and Plywood Sector only.
- (5) Source: Washington State Employment Security Department, Employment and Payrolls in Washington State, No. 113, Fourth Quarter, 1974.
- (6) Source: Annual Census of Manufactures, 1972, U.S. Dept. of Commerce, Bureau of the Census.
- (7) Figures represent carrying capacity not expected demand. Source: National Forest Recreation Survey, 1960.
- (8) Assumes maximum output, or carrying capacity for each resource.

FAVORABLE EFFECTS

Alternative No. 2 would enhance the recreation aspects of the local economy more than any of the other alternatives.

Limitations placed upon timber management for protection of other resource values would be required in the following areas under this Alternative:

1. Class I and II Streamside Management Units.
2. Wildlife buffer strips around lakes and meadows, and in the elk calving area.
3. Where soil protection limits road location, or requires sophisticated logging methods keeping the log free of the ground.
4. Most areas of Visual Quality-Retention Objective and some areas of Partial Retention Objective.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

This item is the same as under Alternative No. 1.

SOILS

FAVORABLE EFFECTS

Soil impacts would be expected to be less detrimental than under any of the other alternatives because of fewer acres to be logged, and miles of road to be built. The potential for damage from slash disposal would also be less than any of the other alternatives.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Overall the impact on soils should not be much different than under Alternative No. 1, however, raising road construction standards to enable them to carry large numbers of recreationists safely may have the potential to increase soil movement. For instance, a two lane road designed for heavy traffic flows must be wider than the minimum single lane road used basically for commodity removal. Also, large numbers of people concentrated in campgrounds or other areas can result in excessive soil compaction and vegetation damage. Even relatively few people could have an adverse effect on Unroaded and Wilderness where soils are thin and plant communities are in delicate balance.

These effects can be minimized by locating campgrounds and similar gathering areas where soils and vegetation are least likely to be damaged through over use. In both developed and undeveloped areas, limitations may be necessary on the number

of persons using the area during a particular period of time. In Unroaded and Wilderness trail networks can be designed to aid in dispersing people over a large portion of the area rather than congregating them.

THREATENED AND ENDANGERED PLANTS AND WILDLIFE

FAVORABLE EFFECTS

The potential for adversely affecting these plants or wildlife habitat is less than under any of the other alternatives due to less timber harvesting and related activities.

VEGETATION

This alternative would cause a less rapid change in vegetation through timber harvest and related development than the other alternatives.

FAVORABLE EFFECTS

Vegetation in Wilderness would change only by natural succession. This would result in more uneven-aged vegetation typical of unmanaged timber stands. Such vegetative types are desirable from the Wilderness and many recreation view-points.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

This item is the same as under Alternative No. 1.

VISUAL

This alternative would create less drastic changes in the natural landscape than any of the other alternatives.

WATER

FAVORABLE EFFECTS

Impacts on water quality are potentially less detrimental than under any of the other alternatives as a result of less timber harvest, road building and slash disposal.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Today the most significant impact on water quality is siltation, both natural occurring and as a result of inadequate soil protection in various management activities. Use of the Planning Unit by large numbers of people near lakes and streams would increase the potential hazard of pollution by sewage and garbage. This hazard can be alleviated by careful location of campgrounds and construction of acceptable sanitary facilities. Such facilities are expensive both to construct and maintain.

WILDERNESS

All Roadless and Undeveloped Areas in this Planning Unit, listed in the Final Environmental Statement for those areas, would be allocated to study for possible addition to the National Wilderness Preservation System. This would include any areas added to the inventory since that time.

WILDLIFE

Wildlife habitats within Wilderness would change only as a result of natural occurrences. These habitats would not be manipulated by management activities.

FAVORABLE EFFECTS

It is anticipated that the increasing use of Wilderness would not have an adverse impact on wildlife in the foreseeable future.

More old growth and mature conifer habitat would be retained than in any of the other alternatives.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

While the potential for wildlife harassment is considered to be an adverse environmental effect, as under Alternative No. 1, it is expected to be less severe within Wilderness. If visitor use in Wilderness increases to a level that threatens wildlife, controls such as limiting the numbers of Wilderness visitors may become necessary.

B. LAND USE ALTERNATIVE NO. 5 - RESOURCE MIX

A mix of resource uses and activities are represented by this alternative. It proposes somewhat fewer acres of nonintensive management than does Alternative No. 1.

A summary of the more significant aspects of this proposal follows:

1. Timber Management would be the key use over most of the Planning Unit. In addition, management of this area would include a variety of uses such as dispersed-roaded recreation, watershed, and wildlife.
2. The Shark Rock Area would be recommended for management as a high elevation scenic and dispersed-unroaded recreation area. Upon approval this area would be formally established under 36 CFR 294.1 as the Shark Rock Scenic Area.
3. Two separate areas in the Clear Creek drainage are proposed for management in an Unroaded status. A third Unroaded area would be established along the Lewis River. All of these areas would be managed basically for dispersed-unroaded recreation.
4. An additional campground would be established near the confluence of Clear Creek and the Muddy River.
5. The visual qualities of the area would be considered in all proposed management activities.⁽¹⁾
6. The quality of certain specific wildlife habitats would be protected. These areas would be managed as Key Wildlife Habitat.
7. Soil values would be considered in all management activities.
8. All streams would be managed to maintain water quality standards.⁽²⁾

Rationale: The Lewis River Trail, Upper Clear Creek, and the Clear Creek canyon are the most valuable recreation assets in the Planning Unit. A trail corridor along Clear Creek would have high value for early season use. Timber harvesting would be of high priority on most of the better growing sites.

(1) Refer to Visual Resource Management System in the Glossary.

(2) Refer to Streamside Management units in Glossary.

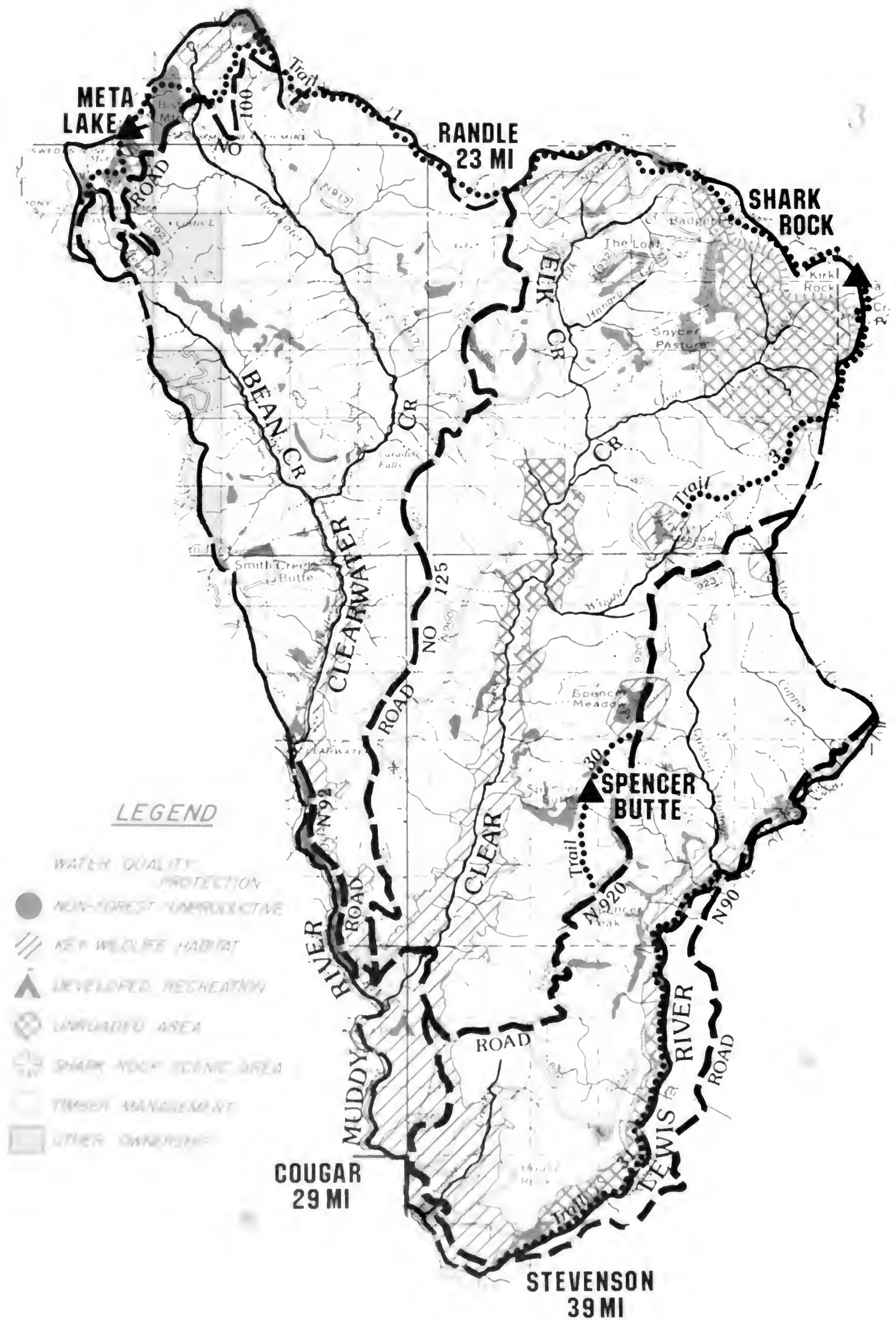


TABLE 3 ALTERNATIVE NO. 3 - ACRES BY MANAGEMENT AREA

Management Area	Acres
Shark Rock Scenic Area	1,170
Water Quality Protection	(45 miles)
Nonforest/Unproductive	3,040
Wilderness Study	None
Unroaded Area	5,940
Key Wildlife Habitat	9,070
Developed Recreation	80
Timber Management	55,320
Private Ownership	1,900
Total Acres in Planning Unit	76,520

MANAGEMENT DIRECTION

Specific management direction for Land Use Alternative No. 3, and the expected outputs to be produced as a result are as follows. As with Alternative No. 2, these will be compared with the same items under the Proposed Action - Land Use Alternative No. 1. Those portions which are true for both alternatives will not be repeated:

DOMESTIC RANGE

It is estimated that about 1,010 acres of suitable transitory range would be available at any given time in the Planning Unit. As in Alternative No. 1, no grazing of domestic livestock would be planned for the Clear Creek Planning Unit.

FIRE MANAGEMENT

This item is the same as under Alternative No. 1.

HISTORICAL AND ARCHAEOLOGICAL

This item is the same as under Alternative No. 1.

LAND OWNERSHIP AND STATUS

This item is the same as under Alternative No. 1.

MINERALS AND ENERGY

This item is the same as under Alternative No. 1.

RECREATION

The Shark Rock Scenic Area would be recommended by the Forest Supervisor to be managed as a high elevation scenic and dispersed-unroaded recreation area, to be established under Regulation 36 CFR 294.1

as the Shark Rock Scenic Area. No additions to the Scenic Area are proposed by this alternative. Two areas within the Clear Creek drainage are proposed for management in an Unroaded status. The first, 2,760 acres, is adjacent to the Shark Rock Scenic Area, but would not be proposed as a formal addition to the scenic area. A second Unroaded area, 1,380 acres in size, would be in the vicinity of Wright Creek and would include only the steepest, most rugged portion of the canyon. A third Unroaded area of 1,810 acres would be located along the Lewis River. This area would be considered as part of a larger Unroaded area along the east side of the Lewis River. Downstream from Crab Creek the boundary of this area would vary to about one-half mile from the river. In this portion, the boundary includes the steeper slopes which are readily visible from the river and Trail No. 31. Above Crab Creek the unroaded area is bounded by the river and Road No. N90, and is almost flat, allowing good access to the river by foot in most places. The vegetation in this proposed river corridor is mostly large trees, except for scattered rocky areas and young timber resulting from fires. All Unroaded areas proposed in Alternative No. 3 would be managed basically for dispersed-unroaded recreation, with no timber removal except for the benefit of recreation or to protect other resource values.

An additional fully developed campground of 50 acres would be proposed near the confluence of Clear Creek and the Muddy River. This campground would provide space for tents as well as for campers and trailers. All proposed developed sites in this alternative would provide a total of 200 family camp units and 60 picnic units.

ROADS AND TRAILS

This alternative would result in approximately 100 to 110 miles of new road construction.

Between 40 and 50 miles of new trails would be required. Most of these would be needed to disperse people within the Unroaded areas and along the major streams.

SOILS

Under this alternative there are 12,430 acres on which little or no road construction would be allowed. In addition, there are 12,530 acres on which roads would be limited to the minimum need to provide access to significant areas in need of management. Timber harvest by suspended logging methods would be required on 12,140 acres.

THREATENED AND ENDANGERED PLANTS AND WILDLIFE

This item is the same as under Alternative No. 1.

TIMBER

Timber would be managed on a full yield basis on 53,190 acres.

This alternative would provide a potential yield of 30.3 MM board feet annually. The actual annual programmed harvest is expected to be 25.2 MM board feet.

In recognition of the need to protect other resource values the following reductions in timber yield within the Special land class would be expected:

<u>Other Resource Constraints</u>	<u>Reduction In Annual Yield (MM bd.ft./Yr.)</u>
Visual Management	2.8
Stream Protection	0.2
Wildlife Habitat	0.1
Total	3.1

These reductions have been reflected in the Potential Yield Level of 30.3 MM bd. ft. above. The difference of 5.1 MM bd. ft. between Potential Yield and Programmed Yield represents the available intensive management opportunities that are currently not programmed. These benefits are listed in the Potential Yield Statement in the current Gifford Pinchot National Forest Timber Management Plan.

The Forest Land Classification describes the Planning Unit from a timber management standpoint. Following are the acres by class for Land Use Alternative No. 3:

<u>Class</u>	<u>Acres</u>
Standard	53,020
Special	11,190
Marginal	170
Deferred	None
Unregulated	5,210
Productive Reserved	None
Nonforest/Unproductive	5,030
	<u>74,620</u>

VISUAL

The following acres by Quality Objective has been identified within the areas proposed for timber harvest in Alternative No. 3:

<u>Quality Objective</u>	<u>Acres</u>
Retention	10,570
Partial Retention	45,770
Modification	8,040
	<u>64,380 (1)</u>

As a result of applying visual management, less than full timber yield would be realized on approximately 10,600 acres of the above retention and partial retention areas.

WATER

This item is the same as under Alternative No. 1.

WILDERNESS⁽²⁾

No Wilderness Study areas would be established under this alternative.

Disposition of the Roadless and Undeveloped Areas within the Clear Creek Planning Unit would be as follows:

UPPER GREEN, NO. 304 AND META LAKE, NO. 344

Most of the 1,020 acres of Area No. 304 and 340 acres of Area No. 344 within the Clear Creek Planning Unit would be in Timber Management. The areas around the lakes would be Key Wildlife Habitat. However, portions of these Areas are outside the Planning Unit and are joined to other Roadless Areas outside.

CLEAR CREEK, NO. 308

Approximately 40 percent of this Area would be managed in an Unroaded status. A small portion would be Key Wildlife Habitat. The remainder, or about 55 percent, would be Timber Management.

SHARK ROCK, NO. 309

Within the Clear Creek Planning Unit 1,170 acres would be within the proposed Shark Rock Scenic Area. The remaining 220 acres would be managed in an Unroaded status. However, the majority of Area No. 309 is in the Upper Lewis River Planning Unit.

No management activities would take place which would remove Areas No. 304, 308, 309, or 344, within the Clear Creek Planning Unit, from Wilderness consideration until decisions are made for the adjacent Roadless Areas outside the Planning Unit.

- (1) All areas from which timber will be harvested on a commercial basis, including certain soils, wildlife habitat, etc. where less than full harvest is expected.
- (2) Refer to RARE Area descriptions on page 24 and map on page 189.

CUSSED HOLLOW, NO. 334

Of the 4,890 acres of this Area within the Clear Creek Planning Unit about 80% would be placed in Timber Management. The remainder would be divided between Unroaded Area and Key Wildlife Habitat. The 1,410 acres of Area No. 334 in the Upper Lewis River Planning Unit was proposed for similar management in the Draft Environmental Statement for that Planning Unit. Two significant differences are first, no Unroaded Area is proposed in the Upper Lewis Planning Unit adjacent to the Unroaded Area west of the Lewis River in the Clear Creek Planning Unit. The other difference is that in the Clear Creek Planning Unit no corridor along the Lewis River is proposed for recreation and scenic management as is the case in the Upper Lewis River Planning Unit.

WILDLIFE

No timber harvesting or road construction would be programmed for the Key Wildlife Habitat surrounding St. Charles, Meta, and Ghost Lakes. These lakes are located north of Road No. 100 in the northwest corner of the Planning Unit.

The Key Habitat shown in this alternative includes approximately 7,600 acres of winter range, 1,070 and 670 acres in the elk calving area.

This alternative would provide for retaining 4,880 acres of old growth and mature conifer habitat. This would represent about 7% of the National Forest land within the Planning Unit. Most of these stands would be found in the Unroaded Areas, two of which are in Clear Creek, with the third along the Lewis River. Smaller areas of these stands would be found in the Shark Rock Scenic Area, Developed Recreation sites, the Nonforest/Unproductive land class, and the foreground areas around Meta, St. Charles, and Ghost Lakes.

WILD AND SCENIC RIVERS

This item is the same as under Alternative No. 1.

D-1 ENVIRONMENTAL IMPACTS - LAND USE ALTERNATIVE NO. 3

AIR

FAVORABLE EFFECTS

The effect on air quality will be less detrimental under Alternative No. 3 than under Alternatives No. 4 or 5 because less logging slash would be disposed of by burning.

The potential for wildfires to become large would be less than under Alternative No. 2 because more miles of roads would allow more efficient access for fire control. This would result in less smoke during the dry summer months.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Typically about 570 acres of slash would be disposed of by burning each year in this Planning Unit. This would amount to burning approximately 142,500 tons of wood residue.

FIRE

FAVORABLE EFFECTS

By providing more roads than Alternatives No. 1 or 2 this alternative would allow intensive management over a larger area. This would allow more of the natural fuels to be removed and provide more firebreaks than either Alternatives No. 1 or 2.

ADVERSE EFFECTS

This item is the same as under Alternative No. 1.

HISTORICAL AND ARCHAEOLOGICAL

This item is the same as under Alternative No. 1.

LAND OWNERSHIP AND STATUS - MINERALS AND ENERGY

These items are the same as under Alternative No. 1.

NOISE

FAVORABLE EFFECTS

Noise impacts would be expected to be less detrimental than under Alternatives No. 4 or 5 because of less timber harvest and related development.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

The noise potential would be more adverse under this alternative than under Alternatives No. 1 or 2.

SOCIAL AND ECONOMIC

Alternative No. 3 is very similar to Alternative No. 1 as far as social and economic impacts are concerned. It does, however, place somewhat more emphasis on production of tangible commodity values than does Alternative No. 1.

The option of committing 7,190 acres of Scenic, Unroaded, and Developed Recreation areas to commodity production is retained for the future.

Following are some projected outputs expected as a result of implementing Land Use Alternative No. 3:

Timber Harvest

Sawtimber ⁽¹⁾	25.2 MM bd.ft./Year
Return to the Federal Treasury ⁽²⁾	\$2,627,100/Year
25% Funds to the counties ⁽³⁾	\$ 875,700
Jobs provided - Wood Industry ⁽⁴⁾	277
Payroll/employee in primary mfr. ⁽⁵⁾	\$ 11,560
Total payroll in primary mfr.	\$3,202,120
Value added per employee in primary mfr. ⁽⁶⁾	\$ 14,000
Total value added in primary mfr.	\$3,878,000
Jobs provided - Secondary Industries and Services	776

(1) Based upon a level of management including commercial and precommercial reforestation of all nonstocked areas and planting genetically superior stock on all accessible acres.

(2) Based upon actual bid prices for timber sold on the Gifford Pinchot National Forest in Calendar Year 1974.

(3) Paid to the counties in which timber is harvested in lieu of taxes. Based upon (2) above.

(4) Source: U.S. Forest Service, Pacific Northwest Forest and Range Experiment Station, 1975, Research Paper PNW-189. Sawtimber, Veneer and Plywood Sectors only.

(5) Source: Washington State Employment Security Department, Employment and Payrolls In Washington State, No. 113, Fourth Quarter, 1974.

(6) Source: Annual Census of Manufactures, 1972, U.S. Dept. of Commerce, Bureau of the Census.

Recreation

	<u>Visitor Days/Year</u> ⁽¹⁾
Camping - Developed sites for trailers, campers, etc.	57,100
Picnicking	14,000
Hiking and Riding	39,300
Winter Sports	19,500
Hunting	12,800
Fishing	11,200
Scenic Driving by Car	19,500
Berry Picking	105,000

Based upon the level of financing received by the Gifford Pinchot National Forest for Fiscal Year 1976 the annual administrative cost of implementing this alternative would be about \$1,354,700⁽²⁾. This level of funding is not necessarily adequate to provide a high quality of management for all resources. Historically timber management has received a proportionately larger share of requested financing than some of the other resources.

FAVORABLE EFFECTS

This item is the same as under Alternative No. 1, except no limitations would apply to timber harvesting due to an Unroaded Area north of Road No. 100, since there is no such Unroaded Area in this alternative.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

This item is the same as under Alternative No. 1.

SOILS

FAVORABLE EFFECTS

Soil impacts are expected to be less detrimental than for Alternatives No. 4 or 5 because fewer acres would be logged, and less slash will be disposed of by burning.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

This item is the same as under Alternative No. 1.

THREATENED AND ENDANGERED PLANTS AND WILDLIFE

FAVORABLE EFFECTS

The potential for adversely affecting these plants or wildlife habitat is less than under Alternatives No. 4 or 5 due to less timber harvesting and related activities.

(1) Figures represent carrying capacity, not expected demand. Source: National Forest Recreation Survey, 1960.

(2) Assumes maximum output, or carrying capacity for each resource.

VEGETATION

This item is the same as under Alternative No. 1.

VISUAL

This alternative would create less drastic changes in the natural landscape than Alternatives No. 4 or 5.

WATER

FAVORABLE EFFECTS

Impacts on water quality are potentially less detrimental than under Alternatives No. 4 or 5 as a result of less timber harvest, road building, and slash disposal.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

The potential for adverse impact on water quality as a result of use by people is greater under this alternative than any of the others, except for Alternative No. 2 which would specifically invite recreationists to large areas of the Planning Unit.

WILDERNESS

The following impacts would result if Alternative No. 3 were fully implemented. However, as indicated under Wilderness on page 42, no management activities would take place which would remove RARE Areas No. 304, 309, or 344 from Wilderness consideration until decisions are made for the adjacent Roadless Areas outside the Planning Unit.

None of the existing Inventoried Roadless Areas would be considered for Wilderness Study under this alternative.

The activities proposed by this alternative would not affect the Wilderness characteristics of Roadless Areas outside the Planning Unit, except in the case of the Cussed Hollow Area. However, some reduction in the quality of isolation could be expected as a result of any reduction in size of a Roadless Area.

UPPER GREEN, NO. 304; CUSSSED HOLLOW, NO. 334; META LAKE, NO. 344;
AND CLEAR CREEK, NO. 308

Timber harvesting and related activities would occur in the Upper Green, Meta Lake, and Cussed Hollow Areas. Those portions of the Upper Green and Meta Lake Areas outside the Planning Unit are adjacent to larger Roadless Areas and would still meet the minimum size requirement for Wilderness consideration. The Cussed Hollow Area would be reduced to less than 5,000 acres outside the Clear Creek Planning Unit and would not meet the minimum size requirement. The same activities would

take place in 6,730 acres of the Clear Creek Area located outside of the proposed Unroaded Area. The remaining 3,660 acres would be too small for Wilderness consideration. These activities would remove these areas from Wilderness consideration within the next ten years.

SHARK ROCK, NO. 309

Management of the Shark Rock Scenic Area envisions removal of timber to protect adjacent resources. This may gradually remove the Shark Rock Area from Wilderness consideration within the Clear Creek Planning Unit. That portion of the Shark Rock Area outside the Planning Unit would still meet the minimum size requirement since it is adjacent to other Roadless Areas. Under this alternative 220 acres of the Shark Rock Area would be managed in an Unroaded Status just outside of the Shark Rock Scenic Area.

WILDLIFE

FAVORABLE EFFECTS

More old growth and mature conifer habitat would be retained than under Alternatives No. 4 or 5.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

A smaller portion of the Planning Unit would remain in an unroaded or undeveloped state than under Alternatives No. 1 or 2. Easier access to the Planning Unit would increase the potential for wildlife harassment.

C. LAND USE ALTERNATIVE NO. 4 - COMMODITY

This alternative proposes to manage the Clear Creek Planning Unit to provide maximum production of tangible products, particularly wood fiber, while considering all appropriate values.

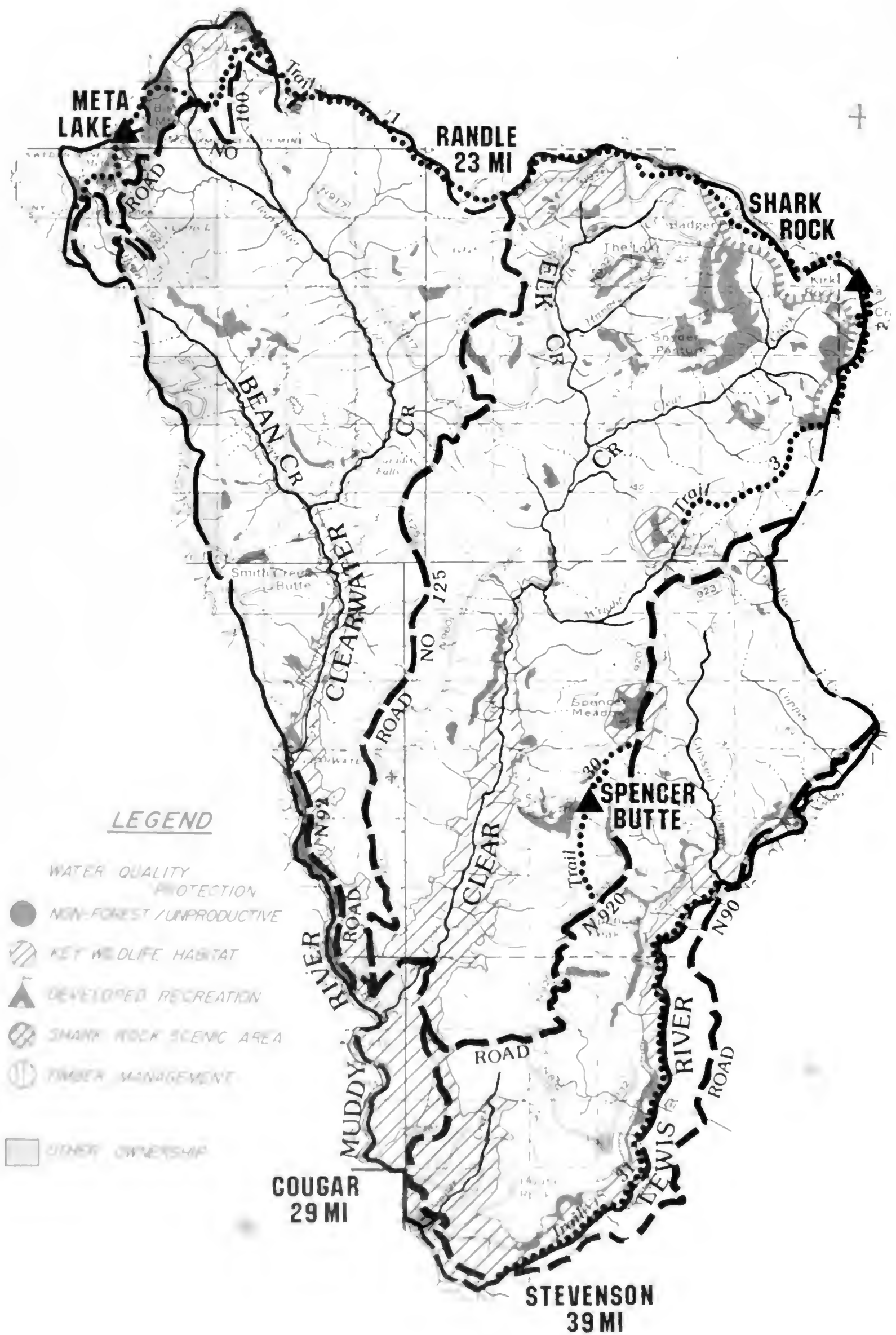
A summary of the are significant aspects of this proposal follows:

1. Timber Management would be the key use over most of the Planning Unit. In addition, management of this area would include a variety of uses such as dispersed-unroaded recreation, watershed, and wildlife.
2. The Shark Rock area would be recommended for management as a high elevation scenic and dispersed-unroaded recreation area. Upon approval this area would be formally established under 36 CFR 294.1 as the Shark Rock Scenic Area.
3. No additional areas would be managed in an Unroaded or undeveloped status.
4. The visual qualities of the area would be considered in all proposed management activities.⁽¹⁾
5. The quality of certain specific wildlife habitats would be protected. These areas would be managed as Key Wildlife Habitat.
6. Soil values would be considered in all management activities.
7. All streams would be managed to maintain water quality standards.⁽²⁾

Rationale: The Planning Unit is 93 percent productive forest land and is capable of sustaining a relatively high annual yield of timber products to help meet the Nation's wood fiber needs. The potential for meeting recreation needs can be duplicated on other portions of the Forest.

(1) Refer to Visual Resource Management System in the Glossary.

(2) Refer to Streamside Management Units in Glossary.



C. LAND USE ALTERNATIVE NO. 4 - COMMODITY

This alternative proposes to manage the Clear Creek Planning Unit to provide maximum production of tangible products, particularly wood fiber, while considering all appropriate values.

A summary of the are significant aspects of this proposal follows:

1. Timber Management would be the key use over most of the Planning Unit. In addition, management of this area would include a variety of uses such as dispersed-unroaded recreation, watershed, and wildlife.
2. The Shark Rock area would be recommended for management as a high elevation scenic and dispersed-unroaded recreation area. Upon approval this area would be formally established under 36 CFR 294.1 as the Shark Rock Scenic Area.
3. No additional areas would be managed in an Unroaded or undeveloped status.
4. The visual qualities of the area would be considered in all proposed management activities.⁽¹⁾
5. The quality of certain specific wildlife habitats would be protected. These areas would be managed as Key Wildlife Habitat.
6. Soil values would be considered in all management activities.
7. All streams would be managed to maintain water quality standards.⁽²⁾

Rationale: The Planning Unit is 93 percent productive forest land and is capable of sustaining a relatively high annual yield of timber products to help meet the Nation's wood fiber needs. The potential for meeting recreation needs can be duplicated on other portions of the Forest.

(1) Refer to Visual Resource Management System in the Glossary.

(2) Refer to Streamside Management Units in Glossary.

ROADS AND TRAILS

This alternative would result in approximately 100 to 110 miles of new road construction. Almost all of these would be for the removal of timber. Few roads in this alternative would be constructed to standards of width and safety needed to move large numbers of recreationists. The typical logging road is one lane width with occasional turnouts for passing.

Between 40 and 50 miles of new trails would be required. Most of these would be located along the major streams. Because of emphasis on production of tangible products under this alternative the opportunity for quality trail experiences, even along the major streams, would be less than any of the other alternatives.

SOILS

Under this alternative there are 14,780 acres on which little or no road construction would be allowed. In addition, there are 13,820 acres on which roads would be limited to the minimum needed to provide access to the significant areas in need of management. Timber harvest by suspended logging methods would be required on 14,520 acres.

THREATENED AND ENDANGERED PLANTS AND WILDLIFE

This item is the same as under Alternative No. 1.

TIMBER

Timber would be managed on a full yield basis on 56,510 acres.

This alternative would provide a potential yield of 32.4 MM board feet annually. The actual annual programmed harvest is expected to be 27.0 MM board feet.

In recognition of the need to protect other resource values, the following reductions in timber yield within the Special land class would be expected:

<u>Other Resource Constraints</u>	<u>Reduction In Annual Yield (MM bd.ft./Yr.)</u>
Visual Management	3.1
Stream Protection	0.2
Wildlife Habitat	0.1
Total	3.4

These reductions have been reflected in the Potential Yield Level of 32.4 MM board feet above. The difference of 5.4 MM board feet between Potential Yield and Programmed Yield represents the available intensive management opportunities that are currently not programmed. These benefits are listed in the Potential Yield Statement in the current Gifford Pinchot National Forest Timber Management Plan.

The Forest Land Classification describes the Planning Unit from a timber management standpoint. Following are the acres by class for Land Use Alternative No. 4:

<u>Class</u>	<u>Acres</u>
Standard	56,280
Special	12,720
Marginal	230
Deferred	None
Unregulated	360
Productive Reserved	None
Nonforest/Unproductive	5,030
	<u>74,620</u>

VISUAL

The following acres by Quality Objective have been identified within the areas proposed for timber harvest in Alternative No. 4:

<u>Quality Objective</u>	<u>Acres</u>
Retention	11,980
Partial Retention	48,950
Modification	8,300
	<u>69,230</u> (1)

As a result of applying visual management, less than full timber yield would be realized on approximately 12,000 acres of the above retention and partial retention areas.

WATER

This item is the same as under Alternative No. 1.

WILDERNESS(2)

No Wilderness Study Areas would be established under this alternative.

Disposition of the Roadless and Undeveloped Areas within the Clear Creek Planning Unit would be as follows:

UPPER GREEN, NO. 304 AND META LAKE, NO. 344

Most of the 1,020 acres of Area No. 304 and 340 acres of Area No. 344 within the Clear Creek Planning Unit would be in Timber Management. The areas around the lakes would be Key Wildlife Habitat. However, portions of these Areas are outside the Planning Unit and are joined to other Roadless Areas outside.

(1) All areas from which timber will be harvested on a commercial basis including certain soils, wildlife habitat, etc. where less than full harvest is anticipated.

(2) Refer to RARE Area descriptions on page 24 and map on page 189.

CLEAR CREEK, NO. 308

Almost all of this Area would be in Timber Management. A small part would be in Key Wildlife Habitat in Clear Creek and the area of Spencer Butte.

SHARK ROCK, NO. 309

Within the Clear Creek Planning Unit 1,170 acres would be within the proposed Shark Rock Scenic Area. The remaining 220 acres would be in Timber Management. However, the majority of Area No. 309 is in the Upper Lewis River Planning Unit.

No management activities would take place which would remove Areas No. 304, 308, 309, or 344, within the Clear Creek Planning Unit, from Wilderness consideration until decisions are made for the adjacent Roadless Areas outside the Planning Unit.

CUSSED HOLLOW, NO. 334

Of the 4,890 acres of this Area within the Clear Creek Planning Unit about 80% would be placed in Timber Management. The remainder would be in Key Wildlife Habitat. The 1,410 acres of Area No. 334 in the Upper Lewis Planning Unit was proposed for similar management in the Draft Environmental Statement for that Planning Unit. One significant difference is that in the Clear Creek Planning Unit no corridor along the Lewis River is proposed for recreation and scenic management as is the case in the Upper Lewis River Planning Unit.

WILDLIFE

No timber harvesting or road construction would be programmed for the Key Wildlife Habitat surrounding St. Charles, Meta, and Ghost Lakes. These lakes are located north of Road No. 100 in the northwest corner of the Planning Unit.

The Key Habitat shown in this alternative includes approximately 9,550 acres of winter range, 1,070 acres of buffer strip and 670 acres in the elk calving area.

This alternative would provide for retaining 1,330 acres of old growth and mature conifer habitat. This would represent about 2% of the National Forest land within the Planning Unit. These stands would be scattered over the Planning Unit, in the Shark Rock Scenic Area, the foreground areas around Meta, St. Charles, and Ghost Lakes, Developed Recreation sites and the Nonforest/Unproductive land class.

WILD AND SCENIC RIVERS

This item is the same as under Alternative No. 1.

C-1 ENVIRONMENTAL IMPACTS - LAND USE ALTERNATIVE NO. 4

The potential for adverse impact upon such resources as vegetation, the soils, water, wildlife, visual and air as a result of tangible commodity removal would be greater under this alternative than any of the other alternatives except No. 5. This is due to the emphasis of Alternative No. 4 on the production of commodity outputs, particularly timber.

AIR

FAVORABLE EFFECTS

The potential for wildfires to become large is less under Alternative No. 4 than under Alternatives No. 1 or 2 because more miles of roads would allow more efficient access for fire control.

The reduction in natural build-up of fuels through timber harvesting would be greater than under any of the other alternatives, except No. 5. These conditions should result in less smoke during the dry summer and early fall months as a result of wildfire.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

This alternative would have the potential to affect air quality more adversely than any of the other alternatives, except No. 5.

Typically about 610 acres of slash would be disposed of by burning each year in this Planning Unit. This would amount to burning approximately 152,500 tons of wood residue.

FIRE

FAVORABLE EFFECTS

By providing more roads than Alternatives No. 1 or 2, this alternative would allow intensive management over a larger area. This would allow more of the natural fuels to be removed and provide more firebreaks than either Alternatives No. 1 or 2. These items are more favorable under Alternative No. 4 than any of the other alternatives, except No. 5 because more timber harvest would occur.

Fewer fires should occur than under Alternatives No. 2 or 3 since fewer people would be expected to use the Planning Unit.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Management for intensive production of timber would have the potential of fewer fires being started than any of the other alternatives, except No. 5. However, the average fire size

and resource damage is expected to be significantly greater. This is so because fires attributed to industrial operations generally occur in areas being logged. Such areas usually have large quantities of logs and slash on the ground. Many times these fuels are very dry compared to standing green trees. Also, most timber harvesting occurs at the lower elevations where the vegetation is heavier than that near timberline. During periods of very dry and windy weather conditions fire can spread with surprising speed in such areas of fuel concentrations. Not all fires are the result of man's activities. Concentrations of these fuels pose a serious hazard during the so-called "dry lightning" storms which are common along the Cascade Range during the summer months. These storms sometimes start numerous small fires and are usually accompanied by little or no rainfall.

HISTORICAL AND ARCHAEOLOGICAL

This item is the same as under Alternative No. 1.

LAND OWNERSHIP AND STATUS - MINERALS AND ENERGY

These items are the same as under Alternative No. 1.

NOISE

FAVORABLE EFFECTS

Noise impacts would be less detrimental than under Alternative No. 5 because of less timber harvest and related development.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Noise would be potentially more adverse under this alternative than any of the others except No. 5, because of more timber harvesting and related activities.

SOCIAL AND ECONOMIC

Alternative No. 4 would enhance the largely timber based local economy to a greater degree than any of the other alternatives, except No. 5, while at the same time placing less emphasis on management for Wilderness and recreation values, particularly dispersed-unroaded recreation.

Even though this alternative emphasizes timber harvest, dispersed-roaded recreation would be expected to increase as a result. For example, scenic driving opportunities should increase because of additional miles of road. The roads would also provide improved access for such winter sports as cross-country skiing and other snow activities.

The option of committing 1,200 acres of Scenic and Developed Recreation areas to commodity production would be reserved for the future.

Following are some specific outputs expected as a result of implementing Land Use Alternative No. 4:

Timber Harvest

Sawtimber ⁽¹⁾	27.0 MM bd.ft./Year
Return to the Federal Treasury ⁽²⁾	\$2,814,750/Year
25% Funds to the counties ⁽³⁾	\$ 938,250
Jobs provided - Wood Industry ⁽⁴⁾	297
Payroll employee in primary mfr. ⁽⁵⁾	\$ 11,560
Total payroll in primary mfr.	\$3,433,320
Value added per employee in primary mfr. ⁽⁶⁾	\$ 14,000
Total value added in primary mfr.	\$4,158,000
Jobs provided - Secondary Industries and Services	832

Recreation

	<u>Visitor Days/Year</u> ⁽⁷⁾
Camping - Developed Sites for trailers, campers, etc.	21,400
Picnicking	14,000
Hiking and Riding	39,300
Winter Sports	19,500
Hunting	13,900
Fishing	11,200
Scenic Driving by Car	19,500
Berry Picking	105,000

- (1) Based upon a level of management including commercial and precommercial thinning, reforestation of all nonstocked areas and planting of genetically superior stock on all accessible acres.
- (2) Based upon actual bid prices for timber sold on the Gifford Pinchot National Forest in Calendar Year 1974.
- (3) Paid to the counties in which timber is harvested in lieu of taxes. Based upon (2) above.
- (4) Source: U.S. Forest Service, Pacific Northwest Forest and Range Experiment Station, 1975, Research Paper PNW-189, Sawtimber, Veneer, and Plywood Sector only.
- (5) Source: Washington State Employment Security Department, Employment and Payrolls In Washington State, No. 113, Fourth Quarter, 1974.
- (6) Source: Annual Census of Manufactures, 1972, U.S. Dept. of Commerce, Bureau of the Census.
- (7) Figures represent carrying capacity, not expected demand. Source: National Forest Recreation Survey, 1960.

Based upon the level of financing received by the Gifford Pinchot National Forest for Fiscal Year 1976 the annual administrative cost of implementing this alternative would be about \$1,304,600⁽¹⁾. This level of funding is not necessarily adequate to provide a high quality of management for all resources. Historically timber management has received a proportionately larger share of requested financing than some of the other resources.

FAVORABLE EFFECTS

Alternative No. 4 would enhance the largely timber based local economy to a greater degree than any of the other alternatives except No. 5.

No limitations would apply to timber harvesting due to an Unroaded Area north of Road No. 100 as was true in Alternative No. 1. There is no similar Unroaded Area in this alternative.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

This item is the same as under Alternative No. 1.

SOILS

FAVORABLE EFFECTS

This item is the same as under Alternative No. 1.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

The potential for adverse soil impacts would be greater than under any of the other alternatives, except No. 5, particularly in areas where those alternatives propose to be managed in an undeveloped status. Those undeveloped areas contain some of the steeper, more rugged portions of the Planning Unit, most of which is also productive forest land. Timber harvesting in these areas, even by suspended methods, would require stringent erosion control measures in many cases.

THREATENED AND ENDANGERED PLANTS AND WILDLIFE

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

The potential for adversely affecting these plants or wildlife habitat is greater than under Alternatives No. 1, 2, or 3 due to more timber harvesting and related activities.

VEGETATION

This alternative would cause a more rapid change in vegetation through timber harvest and related development than any of the other alternatives, except No. 5.

(1) Assumes maximum output, or carrying capacity for each resource.

FAVORABLE EFFECTS

Under Alternative No. 4 changes in vegetative types, because of timber harvesting and related activities, would occur at a more rapid rate than under any of the other alternatives, except No. 5. This would provide increased benefits over any of the other alternatives, except No. 5, in the form of increased wood fiber production as discussed under Alternative No. 1.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

This item is the same as under Alternative No. 1.

VISUAL

This alternative would create more drastic changes in the natural landscape than any of the other alternatives, except No. 5, because of timber harvesting and related activities.

WATER

FAVORABLE EFFECTS

Impacts on water quality as a result of use by people would be expected to be less detrimental than under Alternative No. 2.

The potential of increasing the quantity of water produced by the Planning Unit through timber harvesting would be greater than under any of the other alternatives, except No. 5.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

As indicated under Soils above, this alternative would have a significant potential to downgrade water quality on those areas described as undeveloped under Alternatives No. 1, 2, and 3. This impact would largely be a result of timber harvest and related activities.

WILDERNESS

The following impacts would result if Alternative No. 4 were fully implemented. However, as indicated under Wilderness on page 42, no management activities would take place which would remove RARE Areas #304, 308, 309, or 344 from Wilderness consideration until decisions are made for the adjacent Roadless Areas outside the Planning Unit.

None of the existing Inventoried Roadless Areas would be considered for Wilderness Study under this alternative.

The activities proposed by this alternative would not affect the Wilderness characteristics of Roadless Areas outside the Planning Unit, except in the case of the Cussed Hollow Area. However,

some reduction in the quality of isolation could be expected as a result of any reduction in size of a Roadless Area.

UPPER GREEN, NO. 304; META LAKE, NO. 344; CUSSED HOLLOW, NO. 334
AND CLEAR CREEK, NO. 308

Timber harvesting and related activities would occur in the Upper Green, Meta Lake, and Cussed Hollow Areas. Those portions of the Upper Green and Meta Lake Areas outside the Planning Unit are adjacent to larger Roadless Areas and would still meet the minimum size requirement for Wilderness consideration. The Cussed Hollow Area would be reduced to less than 5,000 acres outside the Clear Creek Planning Unit and would not meet the minimum size requirement. The same activities would take place within the entire Clear Creek Area. These activities would remove these Areas from Wilderness consideration within the next ten years.

SHARK ROCK, NO. 309

Management of the Shark Rock Scenic Area envisions removal of timber to protect adjacent resources. This may gradually remove that portion of the Shark Rock Area from Wilderness consideration within the Planning Unit. That portion of the Shark Rock Area outside the Planning Unit would still meet the minimum size requirement since it is adjacent to other Roadless Areas. Under this alternative timber management and related activities would occur on 220 acres of the Shark Rock Area just outside of the Shark Rock Scenic Area. These activities would remove this 220 acre area from Wilderness consideration within the next ten years.

WILDLIFE

FAVORABLE EFFECTS

More old growth and mature conifer habitat would be retained than under Alternative No. 5.

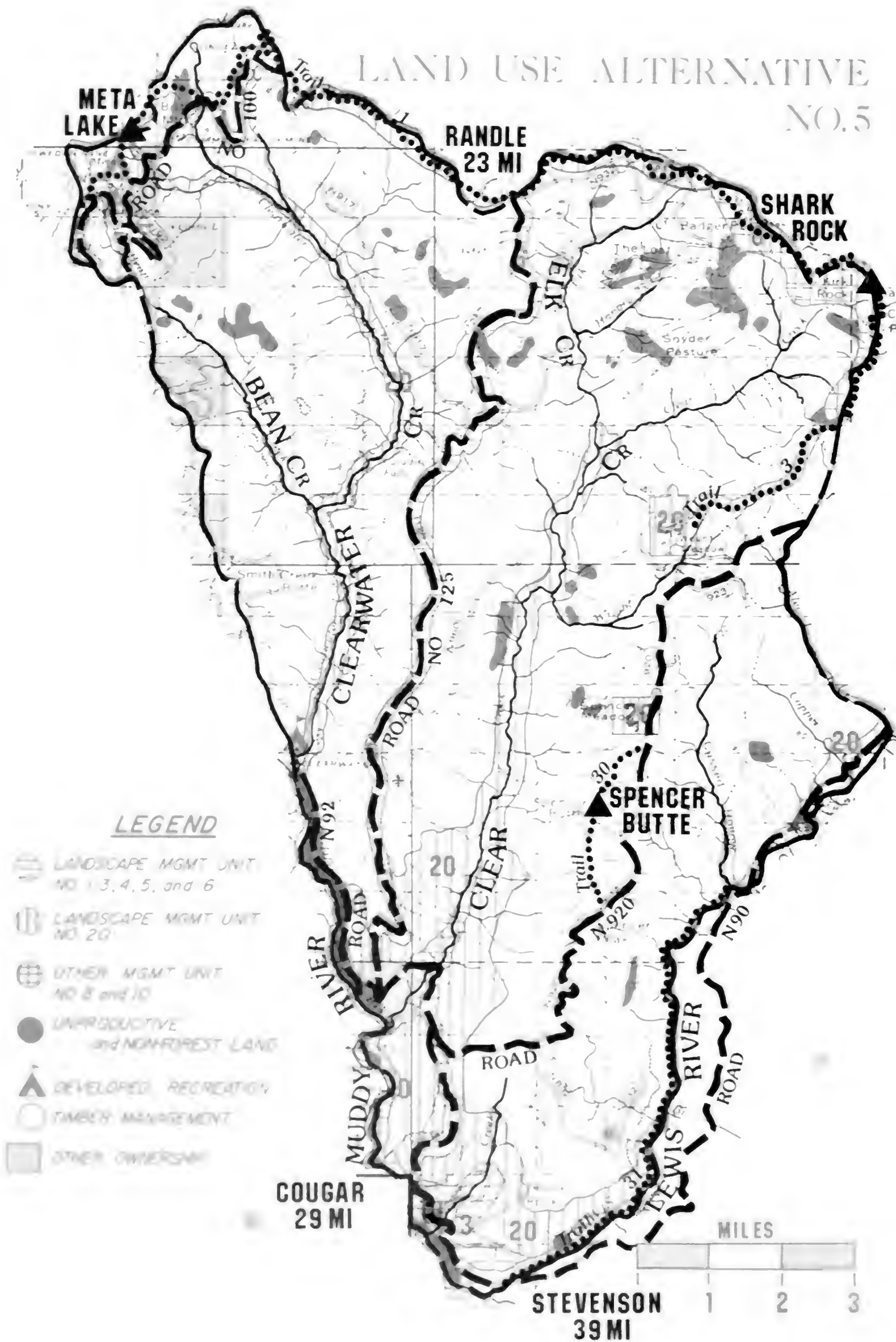
ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

This alternative would be expected to have the greatest potential to affect wildlife populations through more rapid changes in habitats, as a result of timber harvest, than any of the alternatives, except No. 5.

A smaller portion of the Planning Unit would remain in an unroaded or undeveloped state than under any of the other alternatives, except No. 5. Easier access to the Unit would increase the potential for wildlife harassment.



LAND USE ALTERNATIVE NO. 5



D. LAND USE ALTERNATIVE NO. 5 - THE PRESENT PLAN

This alternative represents the St. Helens Ranger District Multiple Use Plan, which is the current management plan covering the Clear Creek Planning Unit. If some combination of Alternatives No. 1 through 4, or some other alternative, is not approved for use, then Alternative No. 5 would continue to serve as the basic management direction for this Planning Unit. In that case, Alternative No. 5 would be revised to reflect such current management direction as Streamside Management Units and the Visual Resource Management System.

A summary of the more significant aspects of this proposal follows:

1. Landscape Management Units are established adjacent to certain recreation development sites, water, and routes of travel which now receive, or will receive in the future, varying degrees of public use. These Units are managed to protect the scenic and resultant recreation values.
2. In addition to those areas in No. 1 above, Other Management Units are recognized where special management considerations are needed.
3. The Shark Rock area is the only significant area managed in an undeveloped status. This area would be recommended for establishment under 36 CFR 294.1 as the Shark Rock Scenic Area.

TABLE 5 ALTERNATIVE NO. 5 - ACRES BY MANAGEMENT AREA

Management Area	Acres
Water Quality Protection	N/A
Nonforest/Unproductive	2,020
Wilderness Study	0
Unroaded Area	N/A
Key Wildlife Habitat	N/A
Developed Recreation	30
Landscape Management Units No. 1, 3, 4, 5, and 6	4,010
Landscape Management Unit No. 20	10,650
Other Management Units No. 8 and 10	2,490
Timber Management	55,420
Other Ownership	1,900
Total Acres in Planning Unit	76,520

MANAGEMENT DIRECTION

Specific management direction for Land Use Alternative No. 5 and the expected outputs produced as a result are as follows. The format is not directly comparable to that used for Alternatives No. 1 through 4, since the basic data and criteria were somewhat different than that in use today:

LANDSCAPE MANAGEMENT UNITS

The following prescriptions should be considered applicable to each Landscape Management Unit:

1. Logging will be restricted to areas where trees can be removed without excessive damage to the recreation resources (aesthetics).
 - a. Slopes under 30% will be tractor logged. Rubber tired skidders will be specified in all cases where they are operable.
 - b. Slopes over 30% will be logged by mobile yarders. Average yarding distance will be two hundred feet.
 - c. Inoperable slopes will not be logged until equipment has been developed that is capable of removing individual trees by selective system.
2. The background⁽¹⁾ will be managed by using normal intermediate cutting and shelterwood systems where silviculturally practical. Clearcut units will be kept small as practical and the unit shaped to blend with the landscape. Foreground⁽²⁾ will be adequately screened from clearcuts.
3. Rotation age will be extended to 175 years or more in the foreground to decrease amount of timber removed at any one time.

LANDSCAPE MANAGEMENT UNIT No. 1 - LEWIS RIVER ROAD No. 1190

1. Foreground areas under 30% slope with stands of average defect will be treated on a tree by tree basis to keep the stand in as good appearing condition as possible. When regeneration cutting becomes necessary, depending on stand condition, a two or three stage shelterwood cut will be used. Final removal of seed trees will be on a gradual and selective basis so the transition will be as natural as possible.
2. The background will be managed by using normal intermediate cutting and shelterwood systems to keep the stand as homogeneous as possible.

LANDSCAPE MANAGEMENT UNIT No. 3 - SPELZER ROAD No. 11920 AND PEPPER CREEK ROAD No. 11336

1. Old growth overstory will be gradually removed to avoid excessive damage to the remaining stand.

- (1) The background, or distance view area, is that area beyond the foreground, needed to provide an attractive backdrop.
- (2) The foreground is the occupied portion of the LMU, and also the immediate adjacent strip of land that is viewed directly and at close range. Here the viewer's sight is directed to details such as individual trees, rather than the landscape.

2. Extend rotation age to 175 years so that the gradual transition to young growth will be as natural as possible.
3. Remaining live trees will be removed on a small group selection basis. Openings created will be planted.
4. Cutting units within the Muddy Project will be scheduled for reforestation as soon as possible.

LANDSCAPE MANAGEMENT UNIT No. 4 - SPIRIT LAKE/IRON CREEK ROAD No. 100

1. Live trees in the foreground will be treated by small (two acres or less) group selection or clearcuts.
2. Due to the critical nature of the soils in the area through which the road passes, landscape management considerations will have to be subordinate to soils considerations in some instances. However, efforts will be made to work existing clearcuts into the landscape as viewed from Mt. St. Helens.

LANDSCAPE MANAGEMENT UNIT No. 5 - MUDDY RIVER ROAD No. 1192

1. In the foreground above Smith Creek old growth stands will receive regeneration cuts based on small clearcuts or group selections (two acres or less) and individual tree selection.
2. The stands of hardwoods and lodgepole pine on the flat bottomland of the Muddy River will be managed for wildlife habitat. Also, consideration will be given for watershed improvement and protection.

LANDSCAPE MANAGEMENT UNIT No. 6 - RANDLE/LEWIS RIVER ROAD No. 125

1. The mature stands will be managed by light intermediate cuts and individual tree selection in the foreground to keep the stands in as good appearing condition as possible. Rotation age will be extended to 175 years.
2. In the foreground, overmature Silver fir and hemlock stands will be harvested by small irregular shaped clearcuts and group selection (two acres or less).
3. Clearcuts in the background will be shaped or reshaped to provide a more appealing landscape.

LANDSCAPE MANAGEMENT UNIT No. 20

This Management Unit includes several scattered areas described by the Multiple Use Plan. They are located along the Lewis River, Clear Creek and Clearwater Creek, and in the areas of Spencer and Wright Meadows. Also included are two trail LMU's, one along the Boundary Trail, No. 1 and the other along the Wright Meadows Trail, No. 80.

No timber harvest is programmed in the Spencer and Wright Meadows areas. However, salvage and sanitation harvesting is allowed in the Spencer Meadows area. Other than this, and those prescriptions applicable to all LMU's, no significant additional management direction applies to Landscape Management Unit No. 20.

OTHER MANAGEMENT UNITS

MANAGEMENT UNIT No. 8 - SHARK ROCK SCENIC AREA

1. No timber harvesting is contemplated within the boundaries of the area. An exception to this decision would be if outbreaks of forest insects or tree diseases threaten to reach epidemic proportions, which would endanger adjacent timber. Should this happen, procedures to protect the recreation values have been outlined in the Shark Rock Area plan.
2. Grazing will be allowed in the Scenic Area. Utilization studies should be conducted to determine if sufficient forage is available for wildlife, transportation stock, and domestic livestock. If over utilization is evident, the priorities for grazing are: 1) Wildlife; 2) Transportation stock; 3) Domestic livestock. Rustic fences will be used to exclude cattle and horses from all occupancy sites.
3. To maintain the natural environment, water impoundments for game and livestock use should be located out of sight of heavily used recreation trails and sites.
4. Fencing may be necessary to protect the water source for developed sites. Unless such fencing is within sight of the occupancy site, it will not be necessary to use rustic fencing.

MANAGEMENT UNIT No. 10 - MUDDY HYDROELECTRIC PROJECT IMPOUNDMENT BASIN (PROPOSED)

1. Continue timber harvest in the impoundment basin on a logical planned sustained yield basis until a construction date is set. Harvest of old growth stands should be given highest consideration.
2. Clearcuts are to be planted with trees, some of which will provide a source of Christmas trees for the general public and commercial enterprises. An intensive effort should be made to reforest all existing clearcuts as quickly as possible.
3. Impact reports will be completed to cover resource situations and management decisions necessary for the full coordination of this proposed project.

Note: As indicated in Section I - Description, the license application for this project has been cancelled by the Federal Power Commission.

MANAGEMENT UNITS NO. 13 AND 14 - SOILS

At the time the Multiple Use Plan was prepared, the Forest's Soil Resource Inventory was not available; therefore, direct soil comparisons are difficult to make between Alternative No. 5 and Alternatives No. 1 through 4.

Considering such factors as adverse location, critical watershed, low growing site, and pumice soils, there are 39,700 acres on which timber harvesting would not be permitted unless intensive management practices are used. These intensive practices may include road construction and timber harvesting techniques not normally used at the time the Multiple Use Plan was prepared, such as endhauling of waste material, compaction of fill embankments, construction of retaining walls, and skyline logging systems.

In addition, there are 5,840 acres of inoperable soils on which timber harvesting would be permitted only when techniques are perfected that allow yarding of logs by lifting them free of the ground and do not require the construction of midslope roads.

WILDERNESS⁽¹⁾

No Wilderness Study areas would be established under this alternative.

Disposition of the Roadless and Undeveloped Areas within the Clear Creek Planning Unit would be as follows:

UPPER GREEN, NO. 304 AND META LAKE, NO. 344

The 1,020 acres of Area No. 304 within the Clear Creek Planning Unit is in Timber Management. The 340 acres of Area No. 344 in the Planning Unit is within Landscape Management Unit No. 20. However, portions of these Areas are outside the Planning Unit and are joined to other Roadless Areas outside.

CLEAR CREEK, NO. 308

About 15% of this Area is within Landscape Management Unit No. 20. The remainder is in Timber Management.

SHARK ROCK, NO. 309

Within the Clear Creek Planning Unit 1,170 acres are within Other Management Unit No. 8. The remaining 220 acres are in Timber Management. However, the majority of Area No. 309 is in the Upper Lewis River Planning Unit.

No management activities would take place which would remove Areas No. 304, 308, 309, or 344, within the Clear Creek Planning Unit, from Wilderness consideration until decisions are made for the adjacent Roadless Areas outside the Planning Unit.

(1) Refer to RARE Area descriptions on page 24 and map on page 189.

CUSSED HOLLOW, NO. 334

Of the 4,890 acres of this Area within the Clear Creek Planning Unit a very minor portion is in Landscape Management Unit No. 20, most of the Area is in Timber Management. This management differs in several ways from the proposed for the 1,410 acres of Area No. 334 in the Upper Lewis River Planning Unit, as shown in the Draft Environmental Statement for that Planning Unit. First, neither the Visual Management System nor Streamside Management Units are specifically included in Land Use Alternative No. 5. Second, the soil guidelines for road location and timber harvest methods are not the same. Alternative No. 5 does not describe specific wildlife habitat management.

D-1 ENVIRONMENTAL IMPACTS - LAND USE ALTERNATIVE NO. 5

As mentioned earlier, some inventory data and management direction used in preparing the Ranger District Multiple Use Plan was not the same as used in land use planning today. This makes comparison of some of the environmental effects with those for Alternatives No. 1 through 4 difficult.

AIR

FAVORABLE EFFECTS

The potential for wildfires to become large is less under Alternative No. 5 than under Alternative No. 2 because more miles of roads would allow more efficient access for fire control.

The reduction in natural buildup of fuels through timber harvesting would be greater than under any of the other alternatives. These conditions should result in less smoke during the dry summer and early fall months as a result of wildfire.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Impacts on air quality would be potentially more adverse under this alternative than any of the alternatives.

Typically about 640 acres of slash would be disposed of by burning each year in this Planning Unit. This would amount to burning approximately 160,000 tons of wood residue.

FIRE

FAVORABLE EFFECTS

By providing more roads than Alternative No. 2, this alternative would allow intensive management over a larger area. This would allow more of the natural fuels to be removed and provide more firebreaks than Alternative No. 2. These items are more favorable under Alternative No. 5 than any of the other alternatives because more timber harvest would occur.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

Management for intensive production of timber would have the potential of fewer fires being started than any of the other alternatives. However, the average fire size and resource damage is expected to be significantly greater. This is so because fires attributed to industrial operations generally occur in areas being logged. Such areas usually have large quantities of logs and slash on the ground. Many times these fuels are very dry compared to standing green trees. Also,

most timber harvesting occurs at the lower elevations where the vegetation is heavier than that near timberline. During periods of very dry and windy weather conditions, fire can spread with surprising speed in areas of such fuel concentrations. Not all fires are the result of man's activities. Concentrations of these fuels pose a serious hazard during the so-called "dry lightning" storms which are common along the Cascade Range during the summer months. These storms sometimes start numerous small fires and are usually accompanied by little or no rainfall.

HISTORICAL AND ARCHAEOLOGICAL

This item is the same as under Alternative No. 1.

LAND OWNERSHIP AND STATUS - MINERALS AND ENERGY

These items are the same as under Alternative No. 1.

NOISE

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

The noise potential would be more adverse under this alternative than under any of the other alternatives.

SOCIAL AND ECONOMIC

Alternative No. 5 would enhance the largely timber based local economy to a greater degree than any of the other alternatives, while at the same time placing less emphasis on management for Wilderness and recreation values, particularly **dispersed**-unroaded recreation.

The option of committing 1,200 acres of Scenic and Developed Recreation areas to commodity production would be retained for the future.

Following are some specific outputs expected as a result of continuing Land Use Alternative No. 5:

Timber Harvest

Sawtimber ⁽¹⁾	28.6 MM bd.ft./Year
Return to the Federal Treasury ⁽²⁾	\$2,981,550/Year
25% Funds to the counties ⁽³⁾	\$ 993,850
Jobs provided - Wood Industry ⁽⁴⁾	315
Payroll/employee in primary mfr. ⁽⁵⁾	\$ 11,560
Total payroll in primary mfr.	\$3,641,400
Value added per employee in primary mfr. ⁽⁵⁾	\$ 14,000
Total value added in primary mfr.	\$4,410,000
Jobs provided - Secondary Industries and Services	882

Recreation

	<u>Visitor Days/Yr.</u> ⁽⁶⁾
Camping - Developed sites for trailers, campers, etc.	21,400
Picnicking	14,000
Hiking and Riding	4,400
Winter Sports	18,700
Hunting	12,800
Fishing	11,200
Scenic Driving by Car	18,700
Berry Picking	105,000

Based upon the level of financing received by the Gifford Pinchot National Forest for Fiscal Year 1976 the annual administrative cost of implementing this alternative would be about \$1,210,800⁽⁷⁾. This level of funding is not necessarily adequate to provide a high quality of management for all resources. Historically timber management has received a proportionately larger share of requested financing than some of the other resources.

- (1) Based upon a level of management including commercial and precommercial thinning, reforestation of all nonstocked areas and planting of genetically superior stock on all accessible acres.
- (2) Based upon actual bid prices for timber sold on the Gifford Pinchot National Forest in Calendar Year 1974.
- (3) Paid to the counties in which timber is harvested in lieu of taxes. Based on (2) above.
- (4) Source: U.S. Forest Service, Pacific Northwest Forest and Range Experiment Station, 1975, Research Paper PNW-189. Sawtimber, Veneer, and Plywood Sector only.
- (5) Source: Annual Census of Manufactures, 1972, U.S. Dept. of Commerce, Bureau of the Census.
- (6) Figures represent carrying capacity, not expected demand. Source: National Forest Recreation Survey, 1960.
- (7) Assumes maximum output, or carrying capacity for each resource.

Limitations are placed upon timber management in the following areas for the protection of other resource values, particularly aesthetics:

1. Foreground of Landscape Management Units No. 1, 3, 4, 5, and 6.
2. Within Landscape Management Unit No. 20, except for the Wright Meadows area, where no harvesting is programmed.
3. Within the marginal land class. The Road Location and Timber Harvest Guidelines on pages 187 and 188 do not apply to this alternative.

FAVORABLE EFFECTS

Alternative No. 5 would enhance the largely timber based local economy to a greater degree than any of the other alternatives.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

This item is the same as under Alternative No. 1.

SOILS

FAVORABLE EFFECTS

This item is the same as under Alternative No. 1.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

The potential for adverse soil impacts is greater under this alternative than under any of the other alternatives, as a result of timber harvest and related activities.

THREATENED AND ENDANGERED PLANTS AND WILDLIFE

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

The potential for adversely affecting these plants or wildlife habitat is greater than under any of the other alternatives due to more timber harvesting and related activities.

VEGETATION

This alternative would cause a more rapid change in vegetation through timber harvest and related development than any of the other alternatives.

FAVORABLE EFFECTS

Under Alternative No. 5, changes in vegetation types because of timber harvesting and related activities, would occur at a more rapid rate than any of the other alternatives. This would provide increased benefits over any of the other alternatives in the form of increased wood fiber production as discussed under Alternative No. 1.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

This item is the same as under Alternative No. 1.

VISUAL

This alternative would create more drastic changes in the natural landscape than any of the alternatives because of timber harvesting and related activities.

WATER

FAVORABLE EFFECTS

Impacts on water quality as a result of use by people would be expected to be less detrimental than under Alternative No. 2.

The potential of increasing the quantity of water produced by the Planning Unit through timber harvesting would be greater than under the other alternatives.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

The potential for adverse soil impacts is greater under this alternative than under any of the other alternatives as a result of timber harvest and related activities.

WILDERNESS

This item is the same as under Alternative No. 4.

WILDLIFE

No specific Key Wildlife Habitat is identified under this alternative.

FAVORABLE EFFECTS

This item is the same as under Alternative No. 1.

ADVERSE EFFECTS WHICH CANNOT BE AVOIDED

This alternative would be expected to have the greatest potential to affect wildlife populations through rapid changes in habitat as a result of timber harvest. There is a probability that as the amount of overmature timber were reduced, the

number of snags and dead topped trees would decline. This may cause a significant loss in numbers of those species highly dependent on dead trees for den or nesting purposes, including flying squirrels, chickaree, certain owls, and osprey.

A smaller portion of the Planning Unit would remain in an unroaded, or undeveloped state, than under any of the other alternatives. Easier access to the Planning Unit would increase the potential for wildlife harassment.

IV. SUMMARY OF EXPECTED OUTPUTS AND ENVIRONMENTAL IMPACTS BY ALTERNATIVE

Table Nos. 7 and 8 summarize the foregoing expected outputs and environmental impacts for each of the five alternatives. These tables include only that data which is compared on a quantitative basis. They are not intended to be a complete evaluation. It is suggested that each reader review the entire Environmental Statement before forming opinions.

TABLE NO. 6

SUMMARY OF EXPECTED OUTPUTS BY LAND USE ALTERNATIVE

	ALTERNATIVE NO. 1 Proposed Action	ALTERNATIVE NO. 2 Wilderness/Recreation	ALTERNATIVE NO. 3 Mix	ALTERNATIVE NO. 4 Commodity	ALTERNATIVE NO. 5 Current
DOMESTIC RANGE					
Suitable transitory range(acres)	970	850	1,010	1,080	1,140
FIRE MANAGEMENT					
	Control all fires at 10 acres or less by 10:00 a.m. on day following discovery				
LAND OWNERSHIP					
	Forest Service will acquire private lands as needed and available				
RECREATION					
Shark Rock Scenic Area (acres)	3,020	None	1,170	1,170	1,170
Unroaded area (acres)	6,360	280	5,940	None	None
Family camp units (no.)	50	470	200	50	50
Picnic sites (no.)	60	135	60	60	60
ROADS AND TRAILS					
Additional roads needed (miles)	90 to 100	45 to 55	100 to 110	100 to 110	90 to 100
Additional trails needed (miles)	40 to 50	30 to 40	40 to 50	40 to 50	0 to 10
SOILS					
No road construction (acres)	10,970	9,260	12,430	14,780	N/A
Min. road construction (acres)	12,080	9,800	12,530	13,820	N/A
Suspended logging (acres)	11,640	10,030	12,140	14,520	N/A
Nonforest/Unproductive (acres)	2,720	2,000	3,040	4,190	2,480
Timber harvest with intensive management practices (acres)	N/A	N/A	N/A	N/A	39,700
Inoperable (acres)	N/A	N/A	N/A	N/A	5,840

TIMBER						
Managed for full yield (acres)		50,120	44,840	53,190	56,510	63,040
Land Classification (acres)						
a. Standard		49,920	44,720	53,020	56,280	40,760
b. Special		12,360	9,200	11,190	12,720	25,160
c. Marginal		200	120	170	230	5,840
d. Deferred		None	15,140	None	None	None
e. Unregulated		7,110	410	5,210	360	840
f. Productive Reserved		None	None	None	None	None
g. Nonforest/Unproductive		5,030	5,030	5,030	5,030	2,020
VISUAL						
Quality objectives within timber harvest areas (acres)						No similar data available
a. Retention		11,690	8,670	10,570	11,980	
b. Partial Retention		43,410	38,750	45,770	48,950	
c. Modification		7,380	6,620	8,040	8,300	
Acres of less than full timber yield (acres)		11,700	8,700	10,600	12,000	8,620
WATER						
Class 1 and 2 streams (miles)		45	45	45	45	No similar data available
WILDERNESS STUDY (acres)						
		None	18,030	None	None	None
WILDLIFE						
Key Habitat (acres)		9,620	8,520	9,070	10,690	No similar data available
Old growth and mature conifer habitat retained (acres)						
		6,080	9,050	4,880	1,330	400

TABLE NO. 7

SUMMARY OF ENVIRONMENTAL IMPACTS BY LAND USE ALTERNATIVE

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	ALTERNATIVE NO. 1 Proposed Action	ALTERNATIVE NO. 2 Wilderness/Recreation	ALTERNATIVE NO. 3 Mix	ALTERNATIVE NO. 4 Commodity	ALTERNATIVE NO. 5 Current
AIR					
Logging slash disposed of by burning					
a. Acres/year	550	480	570	610	640
b. Tons/year	137,000	120,000	142,500	152,500	160,000
WILDERNESS STUDY					
	Would remove RARE Areas No. 308 and 334 from Wilderness consideration	Would provide for all RARE areas to be studied for potential addition to the Wilderness System	Would remove RARE Areas No. 308 and 334 from Wilderness consideration	Would remove RARE Areas No. 308 and 334 from Wilderness consideration	Would remove RARE Areas No. 308 and 334 from Wilderness consideration
SOCIAL AND ECONOMIC					
Area on which option of commodity production is reserved (acres)	9,410	18,500	7,190	1,200	1,200
Property line reduction (miles) Timber Harvest	15	15	15	15	15
Sawtimber (MM bd. ft./Year)(1)	24.2	21.2	25.2	27.0	28.6
Return to the Federal Treasury (\$/Year)(2)	2,522,850	2,210,100	2,627,100	2,814,750	2,981,550
25% Funds to the counties (\$/Year)(3)	840,950	736,700	875,700	938,250	993,850
Jobs provided - Wood Industry (no.)(4)	266	233	277	297	315
Payroll/employee in primary mfr. (\$/Year)(5)	11,560	11,560	11,560	11,560	11,560

Total payroll in primary mfr. (\$/Year)	3,074,960	2,693,480	3,202,120	3,433,320	3,641,400
Value added/employee in primary mfr. (\$/Year) ⁽⁶⁾	14,000	14,000	14,000	14,000	14,000
Total value added in primary mfr. (\$/Year)	3,724,000	3,262,000	3,878,000	4,158,000	4,410,000
Job provided - Secondary Industries and Services (no.)	744	652	776	832	882
Recreation (Visitor days) ⁽⁷⁾					
Camping - developed sites	21,400	135,700	57,100	21,400	21,400
Picnicking	14,000	29,000	14,000	14,000	14,000
Hiking and Riding	39,300	30,600	39,300	39,300	4,400
Winter Sports	18,700	15,000	19,500	19,500	18,700
Hunting	13,900	11,800	12,800	13,900	12,800
Fishing	11,200	11,200	11,200	11,200	11,200
Scenic Driving	18,700	15,000	19,500	19,500	18,700
Berry Picking	105,000	105,000	105,000	105,000	105,000
Administrative Costs (\$/Year)	1,224,900	1,231,800	1,354,700	1,304,600	1,210,800

(1) Based on a level of management including commercial and precommercial thinning, reforestation of all nonstocked areas and planting of genetically superior stock on all accessible acres.

(2) Based upon actual bid prices for timber sold on the Gifford Pinchot National Forest in Calendar Year 1974.

(3) Paid to the counties in which the timber is harvested in lieu of taxes. Based upon (2) above.

(4) Source: U.S. Forest Service, Pacific Northwest Forest and Range Experiment Station, 1975, Research Paper PNW-189. Sawtimber, Veneer and Plywood sector only.

(5) Source: Washington State Employment Security Department, Employment and Payrolls in Washington State, No. 113, Fourth Quarter, 1974.

(6) Source: Annual Census of Manufactures, 1972, U.S. Department of Commerce, Bureau of the Census.

(7) Figures represent carrying capacity, not expected demand. Source: National Forest Recreation Survey, 1960.



V. RELATIONSHIP BETWEEN LOCAL SHORT TERM USES OF MAN'S ENVIRONMENT AND THE MAINTENANCE AND ENHANCEMENT OF LONG TERM PRODUCTIVITY

Each of the five Land Use Alternatives described provides for certain short term uses of the Clear Creek Planning Unit while maintaining and enhancing the long term productivity of the environment. The Forest Service believes each alternative is viable when considered in light of the definition of "Multiple Use" contained in the Multiple Use-Sustained Yield Act of June 12, 1960:

"Multiple Use means the management of all the various renewable surface resources of the national forests so that they are utilized in the combination that will best meet the needs of the American people; making the most judicious use of the land for some or all of these resources or related services over areas large enough to provide sufficient latitude for periodic adjustments in use to conform to changing needs and conditions; that some land will be used for less than all of the resources; and harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land,⁽¹⁾ with consideration being given to the relative values of the various resources, and not necessarily the combination of uses that will give the greatest dollar return or the greatest unit output."

The effects of short term uses of the Planning Unit on the various resources has been discussed for each alternative under Environmental Impacts. The effects of these uses on the maintenance and enhancement of long term productivity is expected to be as follows:

1. Such man made features as roads and borrow pits would have long term effects on Wilderness potential, visual quality, growing sites and certain wildlife and recreational opportunities. These same features would also provide for increased timber productivity through improved access, allowing more intensive management. Better access also results in improved forest protection and makes the land more available for a number of uses, including many forms of recreation.
2. Assuming the land base will remain stable, timber productivity would tend to increase as overmature stands are replaced by young, more vigorous trees, and more intensive timber management practices are applied. The long term effect would be to provide an increased timber production on a per acre basis for the future generations.
3. Timber harvesting, along with other management such as protection of old growth and mature conifers, stream protection, buffer strips around lakes and meadows, and the Nonforest/Unproductive land class would insure that a wide range of wildlife habitat will be available. It is expected that no dramatic change in wildlife species and populations would occur.

(1) Emphasis added.

4. Protection of streams and control of management activities would insure that water quality and quantity available for down stream uses, as well as on site values, would not be impaired.
5. Protection of Unroaded, Scenic, Wilderness Study and similar undeveloped areas would provide certain recreational or Wilderness values while retaining the option to manage such areas for commodity production in the future.

VI. IRREVERSIBLE AND IRRETRIEVABLE COMMITMENT OF RESOURCES

Except for Land Use Alternative No. 2, each of the alternatives would eventually remove all Inventoried Roadless and Undeveloped Areas from consideration as Wilderness. The Wilderness potential described in Alternative No. 2 would require further study and subsequent Congressional action. The option for Congress to declassify Wilderness would remain. Under the Wilderness Act, Wilderness exists as a specific resource and is not synonymous with recreation. To protect the Wilderness values will almost certainly require that increasing limitations be placed on the number of people visiting these areas in the future.

Many of man's activities, such as roads and timber harvesting would reduce the options for maintaining presently undeveloped areas in that status.

Roads and borrow pits are considered to be an irreversible commitment of resource because of the high cost of removing such activities, both from the economic viewpoint and the simple impracticality of returning the area involved to its original state.

If a hydroelectric project is constructed, the dam and reservoir would mean that certain resources would be essentially irretrievably committed. The removal of the project once completed, and rehabilitation of the affected area would be difficult, if not impossible. To a lesser degree the same would probably be true of a geothermal development.

VII. CONSULTATION WITH APPROPRIATE FEDERAL AGENCIES AND REVIEW BY STATE AND LOCAL AGENCIES DEVELOPING AND ENFORCING ENVIRONMENTAL STANDARDS

The Gifford Pinchot National Forest began an intensive effort to involve the public in its land use planning process with an open letter to Forest Users in August 1972, advising them of the overall planning process. The letter also requested input concerning resource data and management direction for the first six Planning Units to be studied, including Clear Creek. At that time the Forest's mailing list for land use planning was composed of about 250 names of individuals, groups and organizations, and government agencies.

In February 1973, a brochure was prepared and sent the public. The mailing list had grown to about 350 names by this time. The brochure contained specific data on the Clear Creek Planning Unit as well as Land Use Alternatives No. 1 through 4. It also invited comments on which alternative was the most desirable. In addition, the brochure announced plans for a public meeting to discuss resource data and alternatives, as well as an "open house" several days following the meeting, at which Forest Service personnel would be available to discuss the data and alternatives for those unable to attend the meeting.

The public meeting was held March 7, 1973, at Woodland, Washington, a small community located near the Clear Creek Planning Unit. Approximately 70 members of the public attended the two hour meeting, a number of these stayed after the meeting to examine data and ask questions. From 10:00 a.m. to 10:00 p.m. on March 12, the same material was available on a continuous basis at the Forest Supervisor's Office in Vancouver, Washington. Sixteen individuals reviewed the data during that time. In addition to these scheduled meetings, the public has frequently been informed that they may review any of the land use planning data at the office of the Forest Supervisor at any time.

Following is a list of individuals, organizations, and government agencies from whom written comments (input) were received concerning the Clear Creek Planning Unit prior to filing the Draft Environmental Statement.

Individuals

David Acoboria
Bob and Ira Spring
Kimball Erdman
Leverett B. Curtis
Allan Porter Dye
Michael L. Collier
Kristian Erikson
Cal Walters
Dean Reed

Ellis Ogilvie
Art Wildey
Frances McCarter
M.E. Opp
Evelyn and Harris Dusenbery
Joseph G. and Marilyn R. Culotti
Eleanor Heller
David S. Covert
Craig Weaver

Individuals (Continued)

Ron Anderson
Fay Ogilvie
Karl W. Jansen
R.M. Thompson
Noel McRae

John M. Allinger
Stephen V. Kenworthy
Alan E. Charlesworth
John Steel

Organizations

Sierra Club (Columbia Group)
Mazamas
Pacific Power and Light Co.
Mount St. Helens Club
Washington State Horseman, Inc.
Sierra Club (Office of the Northwest Representative)
Industrial Forestry Association
The Ptarmigans

Government Agencies

Lewis County Commission
Washington State Department of Natural Resources
Skamania County Commissioners

The comments received have been summarized as follows:

- A. Following are the number of inputs which specifically stated whether they either favored or disfavored each of the alternatives:(1)

<u>Alternative No.</u>	<u>Number of Inputs</u>	
	<u>Favoring</u>	<u>Disfavoring</u>
1	7	1
2	12	1
3	2	1
4	1	6

- B. In addition, 15 inputs either did not state a preferred alternative, or suggested that changes or combinations of alternatives be made.

(1) It should be noted that there is a primary difference between Alternative No. 2 as presented here and its counterpart which appeared in the above described brochure and public meeting. That difference is that as the alternative appeared originally, the general area now displayed as Wilderness Study was shown as Unroaded area. The brochure further stated that the same area could be managed as Wilderness.

- C. The following summary, representing a cross section of viewpoints, was drawn from the inputs received and listed in A. above. The number of inputs agreeing with each comment is shown on the left:

<u>No. of Inputs</u>	<u>Comments on Alternative No. 1</u>
1	Need more backcountry (unroaded area)
1	Provide more picnic areas
1	Provide more trail camps
1	Add more hiking trails
2	Prohibit motorized equipment on trails

<u>No. of Inputs</u>	<u>Comments on Alternative No. 2</u>
5	Need more wilderness
1	Need more backcountry (unroaded area)
1	Provide more campgrounds
1	Need more hiking trails
1	Provide more horse trails
2	Prohibit motorized equipment on trails
1	Prohibit hydroelectric projects

<u>No. of Inputs</u>	<u>Comments on Alternative No. 3</u>
1	Need more horse trails

<u>No. of Inputs</u>	<u>Comments on Alternative No. 4</u>
1	Prohibit motorized equipment on trails
1	Prohibit any facilities except those needed for timber management

- D. The following summary, representing a cross section of viewpoints, is from those inputs described in B. above which do not refer to a specific alternative:

<u>No. of Inputs</u>	<u>Comments</u>
1	Set the Clear Creek area aside as wilderness
1	Provide for more backcountry (unroaded area) along the Boundary Trail, No. 1
2	Prohibit most campgrounds in the Planning Unit
1	Provide for tent camping and primitive sanitary facilities in suitable areas reached by foot only
3	Would prefer more hiking trails

No. of Inputs	Comments
2	Prohibit motorized equipment on hiking trails
4	Provide a natural environment along some hiking trails
1	Land use planning should include the alternative of developing the power potential remaining on the Lewis River
1	Timber harvesting by clearcutting should be practiced only if absolutely necessary and in areas of high regeneration potential
1	A large part of the area should be managed for its timber resource
1	The primary land use for the Planning Unit should be timber management
2	Selective logging should be practiced to preserve the scenic beauty and other resources
1	The maximum area possible should be set aside for roadless recreation

PUBLIC CONTACTS RELATED TO LAND USE PLANNING

The Gifford Pinchot National Forest has made the following public contacts recently concerning a variety of subjects relating at least indirectly to land use planning. The list is not intended to be a complete list, the Forest has numerous ongoing contacts with many individuals, groups, and other agencies:

1. Timber Management Plan

Draft Environmental Statement - April 16, 1974
Final Environmental Statement - February 21, 1975
Timber Management Plan - May 5, 1975

2. Proposed Timber Sales - June, 1974
Resource Development Proposals - June, 1975

These two action plans, published in booklet form, cover proposed timber management activities for the entire Forest for the years 1975 through 1978, and 1976 through 1979 respectively. In addition, they cover, in general, the relationship of timber management with other resource uses.

3. Vegetation Management with Herbicides

Draft Environmental Statement - September 16, 1975
Final Environmental Statement - February 13, 1976

These environmental statements cover the use of herbicides on all National Forest lands in the states of Oregon and Washington for the period July 1, 1976 through September 30, 1977.

4. Water Quality Monitoring

On November 20, 1975, representatives from each of the National Forests in Washington State met with the Washington State Department of Ecology and Region 10 of the Federal Environmental Protection Agency. The purpose of the meeting was to familiarize the D.O.E. and the E.P.A. with the Forest Service water quality monitoring program for non-point source (silvicultural activities) pollution control. The Forest Service requested comments and assistance from these agencies on its monitoring program.

5. Off-Road Vehicle Use and Regulation Policy

Initial public meetings were held May 1, 6, 7, 15, and 20, 1975.

Draft Policy Statement Mailing - November 4, 1975, to 600 individuals, organizations, and businesses. Comment received is currently being analyzed.

6. Trails Assessment Program

Personal, phone, and mail contact was made with Northwest Federation of Outdoor Clubs, (represented by Dave Howard), the Mazamas, and Washington Horseman's Association to assist in assessing present and future trail programming.

DRAFT ENVIRONMENTAL STATEMENT MAILING LIST

The Draft Environmental Statement for the Clear Creek Planning Unit was sent to the following named Federal, State, and local agencies, groups, and individuals:

Federal Agencies

Agricultural Research Service
Area Director for Oregon and Washington, and
Western Regional Supervisor
Agricultural Stabilization and Conservation Service
Army Corps of Engineers
Bonneville Power Administration
Consumer and Marketing Service
Economic Development Administration
Department of Housing and Urban Development
Department of Health, Education, and Welfare
Department of the Interior
Environmental Protection Agency
Federal Aviation Administration
Federal Highway Administration
Federal Power Commission
National Marine Fisheries Service
Soil Conservation Service
U.S. Bureau of Outdoor Recreation
U.S. Fish and Wildlife Service

State Agencies

Division of Mines and Geology
Office of Program Planning and Fiscal Management
Washington State Department of Ecology
Director
State Water Program
Washington State Department of Game
Washington State Department of Fisheries
Washington State Department of Natural Resources

County Agencies

Clark County Commissioners
Lewis County Commissioners
Regional Planning Council of Clark County
Skamania County Board of Commissioners
Skamania County Cooperative Extension Service
Skamania County Planning Commission
Washington State Association of Counties

Organizations and Industry:

American Forestry Association
Burlington-Northern, Land Management Director
Clark College
College of Forest Resources, University of Washington
Columbia Road Runners
Federation of Western Outdoor Clubs
Friends of the Earth
Industrial Forestry Association
Forestry and Range Management Department
Washington State University
Mazamas
Mount St. Helens Club
Mountaineers
National Forest Products Association
National Wildlife Federation
Northwest Steelheaders-Trout Unlimited
Northwest Timber Association
Pacific Northwest River Basin Commission
Pacific Power and Light Company
Ptarmigans
Slippery Rock State College
Sierra Club, Pacific Northwest Chapter
Sparkin'4's
Society of American Foresters
Society for Range Management
Tacoma Audubon Society
School of Forestry, University of Washington
Vancouver 4-Wheelers
Washington Cattlemen's Association
Washington Environmental Council, Incorporated
Washington Forest Protection Association
Washington State Horsemen
Washington State Sportmen's Council
Washington Wool Grower's Association
Western Forest Industries Association
Western Forestry and Conservation Association
Western Wood Products Association
Wilderness Society
Wildlife Management Institute
Wildlife Society

Individuals:

John M. Allinger
Ron Andreason
Bert Cole
Allan Charlesworth
Michael L. Collier
David S. Covert

Joseph and Marilyn Culotti
Dr. Russ Jolley
Stepehn V. Kenworthy
Bob Lee
Frances McCarter
Noel McRae
Mr. & Mrs. Ellis H. Ogilvie
M.E. Opp
Dean Reed
Erwin Rieger
Leveret B. Curtis
Harris Dusenbery
Allan P. Dye
Kristian Erickson
John L. Frewing
Dave Howard
Karl W. Jansen
Elliot Schoffield
David Scoboria
Bob and Ira Spring
R.M. Thompson
Cla Walters
Craig Weaver
Art Wildey
Ross W. Williams

PUBLIC RESPONSE TO THE DRAFT ENVIRONMENTAL STATEMENT

Listed below are those agencies, organizations, and individuals
providing written comments on the Draft Statement:

<u>Input No.</u>	<u>Name</u>	<u>Address</u>	<u>Residence</u> <u>Geographic Area</u>
1	Ellis and Faye Ogilvie	Seattle, WA	North Metro
2	USDA Agricultural Research Service	Berkeley, CA	National
3	Michael L. Collier	Seattle, WA	North Metro
4	Ira Spring	Seattle, WA	North Metro
5	Pacific NW Chapter, Sierra Club	Ashland, OR	Regional
6	Federal Power Commission	San Francisco, CA	National
7	Western Forestry & Conservation Assn. (Industry)	Portland, OR	South Metro
8	Thomas Horobik	Great Falls, MT	National
9	Burlington Northern Railroad	Seattle, WA	North Metro
10	John Frewing	Portland, OR	South Metro
11	U.S. Soil Conservation Service	Spokane, WA	Regional
12	U.S. Department of the Interior	Portland, OR	South Metro
13	Karl W. Jansen	Kalama, WA	Local
14	Vasco J. Fenili	Tacoma, WA	North Metro
15	Washington State Dept. of Fisheries	Olympia, WA	North Metro
16	Washington State Dept. of Game	Olympia, WA	North Metro
17	Harry E. Wilson	Bremerton, WA	North Metro
18	Skamania County Commissioners	Stevenson, WA	Local
19	Harris Dusenbery	Vancouver, WA	South Metro
20	Bonneville Power Administration, Dept. of the Interior	Portland, OR	South Metro
21	U.S. Corps of Engineers	Portland, OR	South Metro
22	M.E. Opp	Longview, WA	Regional
23	John Allinger	Longview, WA	Regional
24	Sierra Club, Pacific NW Representative	Seattle, WA	North Metro
25	Oregon Environmental Council	Portland, OR	South Metro
27	Mazamas (Hiking Club)	Portland, OR	South Metro
28	Eleanor Heller	Portland, OR	South Metro
29	Bob Powne	Portland, OR	South Metro
30	Charles C. Raines	Bellevue, WA	North Metro
31	Gifford Pinchot Study Group (Citizen Grp.)	Longview, WA	Regional
32	Industrial Forestry Association	Portland, OR	South Metro
33	U.S. Dept. of Housing & Urban Development	Seattle, WA	North Metro
34	Lewis County Commissioners	Chehalis, WA	North Metro
35	The Wilderness Society	Denver, CO	National
36	U.S. Environmental Protection Agency	Seattle, WA	North Metro
37	Craig Weaver	Seattle, WA	North Metro

(1) Geographic Area:

- Local - Cowlitz, Skamania, and Lewis Counties, in the State of Washington.
- North Metro - A 20 mile radius of Seattle, Tacoma, or Olympia, Washington.
- South Metro - A 20 mile radius of Portland-Vancouver area.
- Regional - The remaining portion of Forest Service Region Six not included above.
- National - All states beyond Regional level.
- Other - All other countries or territories not included above.

ANALYSIS OF PUBLIC INPUT TO THE CLEAR CREEK DRAFT ENVIRONMENTAL STATEMENT

The format used in this report is a Content Analysis of public input, or a listing by issues of the comments made in response to the Clear Creek Draft Environmental Statement.

The issues were segregated as follows:

Alternative 1	pro	or	con
Alternative 2	pro	or	con
Alternative 3	pro	or	con
Alternative 4	pro	or	con
Alternative 5	pro	or	con
Wilderness	pro	or	con
Unroaded/Roadless			
Areas	pro	or	con
Lewis River Corridor	pro	or	con
Timber Management	pro	or	con
Campgrounds	pro	or	con
Roads	pro	or	con
Trails	pro	or	con
Muddy River Project	pro	or	con
Motorized Use	pro	or	con

A Pro or Con tabulation for a particular Land Use Alternative indicates the respondent specifically favored, or objected to, that alternative.

A Pro or Con tabulation for the other issues shown indicates the respondent was generally in favor of that item, or would rather see less emphasis placed upon it.

A complete analysis of the public input may be reviewed at the Office of the Forest Supervisor.

TABLE 10.3
Public Input Summary for Clear Creek
Draft Environmental Statement January 29, 1975
By Input Number

36 Inputs as of 4/4/75

Alt. No. 1		Alt. No. 2		Alt. No. 3		Alt. No. 4		Alt. No. 5		Wilderness		Unroaded and Roadless		Protection of Lewis River Corridor		Timber Mgmt.		Campgrounds		Roads		Trails		Muddy River Project		Motorized Use Off Road	
Pro	Con	Pro	Con	Pro	Con	Pro	Con	Pro	Con	Pro	Con	Pro	Con	Pro	Con	Pro	Con	Pro	Con	Pro	Con	Pro	Con	Pro	Con	Pro	Con
7	1	1	31	8	31	32	8	13	8	1	-	3	-	5	-	19	1	13	1	-	1	-	1	-	5	34	5
17	32	14				34		31		3		5		22		23	4	18	22	5	4		22	8			
18		22								4				23		5		23		8	5		27	17			
19		25										8		24		34	8	27		22	13		29	19			
27		35								5		9		27				28		24	22			22			
28										13		22		31				34		27	24			25			
29										22		23		37						30	27			27			
31										30		24								34	28			28			
37										35		37								37	29			29			
Totals		9	2	5	1	2	1	1	2	8	-	8	-	7	-	4	4	6	2	9	13	-	-	4	1	9	

Input Numbers

Following is a listing of substantive comments and questions received on the Draft Environmental Statement. Immediately following each comment is a Forest Service response. Not all comments received are included, however, we believe the list is a representative sample:

Input No. 1 - Ellis and Faye Ogilvie

- A. "Page 48 does not include under vegetation the low ground cover plants and endangered flowers that lose their habitat after logging and slash burning."

Response - The discussion cited under Vegetation is intended to include all vegetation types. It is true that those low growing species which thrive under dense tree canopies will be displaced, however, other low plants and flowers grow in the open, sunny areas provided by timber harvesting. These are in turn replaced again by those favoring shade as the young trees planted on the cutover area again grow toward maturity. No threatened or endangered plant species have been identified in this Planning Unit. Refer to Topography, Vegetation, and Climate under Planning Unit Description.

- B. "Critical Soils. Why should there be only 1,530 acres in Alternative No. 2 but 2,490 in Alternative No. 1?"

Response - Using the most current terminology, "Critical Soils" are properly a part of the Nonforest/Unproductive land class. This change has been made in the Final Environmental Statement. Actually a total of 5,030 acres are within this land class as shown in Timber under Planning Unit Description. This total is the same under Alternatives No. 1 through 4. The differences referred to in Table Nos. 1 and 2 result from the fact that these tabulations do not include Nonforest/Unproductive acres in Management Areas not programmed for timber harvest. Table Nos. 1 through 5 are intended to summarize the acres by Management Area for each Alternative. These tables indicate the key, or primary uses for each Alternative. No overlap between Management Area is shown. We have found that attempting to show all Management Area overlaps on one map results in such a vast number of symbols that the result is almost impossible to interpret.

- C. "Roads and Trails. Forty-five miles of new road for timber harvest is better than 90, but why extend them to campgrounds?"

Response - Developed recreation, including campgrounds for trailers and campers is one of the primary uses stressed by Alternative No. 2 to a higher degree than any of the other alternatives.

Input No. 3 - Michael L. Collier

- A. "In your present proposal you have 6,390 acres for roadless recreation yet have already said that nearly 1/3 of it is to have timber harvest. This eliminates any confidence I may have had in supporting the establishment of roadless areas instead of Wilderness."

Response - The Proposed Action has been revised because the private land was removed, the area to be managed in an unroaded status now totals 6,360 acres. As stated on page 34 of the Draft Environmental Statement salvage and sanitation harvesting would be planned only in the 1,720 acres of Unroaded Area north of Road No. 100. This means that occasional, scattered dead and dying trees could be removed by methods not requiring roads such as skyline or helicopter. No annual programmed harvest would be planned in any of the Unroaded Areas.

B. "On page 14 you give the Wilderness quality for each of the four roadless areas. You noted that only Shark Rock had a high quality rating, but who determined this rating system in the first place? Was it someone who had real knowledge and a "feel" for Wilderness? I'll bet the forester who made this quality index had very little information to determine their suitability for Wilderness. Even so, should a medium or low quality rating permanently remove these roadless areas from even a study for Wilderness? Does an area have to be outstanding or unique to be even studied for Wilderness?"

Response - The rating system was developed and applied by the Forest Service. Judgment of the system and its application depends upon the reader's point of view. The rating assigned to each roadless area does not, by itself, automatically remove any area from Wilderness consideration. This environmental statement is an extension of the study process for these areas.

C. "You say that Clear Creek roadless area is too narrow for wilderness. Even if this is true, which I doubt, why can't all this roadless area be considered for a roadless classification without logging?"

Response - The corridor of Unroaded Area along Clear Creek that connects the lower Clear Creek Unroaded Area with the Shark Rock Scenic Area is about 600 feet wide, as stated on page 33 of the Draft Statement. This 600 foot wide corridor would protect the integrity of Clear Creek and the proposed Clear Creek trail.

The wider corridor, as shown on Alternative No. 2, was not selected in light of the relatively high timber values that exist in the corridor.

D. "Finally on page 107 you show the number of inputs favoring and disfavoring the four alternatives from your last request for public input. It shows that the majority, by far, favored Alternative No. 2 which recommended Wilderness classification for most of the roadless areas in this Unit. Yet in your final proposal, you choose to completely disregard these inputs and not propose any Wilderness Study areas at all. Why do you seek our inputs if you do not use them?"

Response - A wide variety of public input is needed and desired. There are several reasons for this. The two most important are: (1) to find out how people feel about certain issues, and (2) to discover pertinent facts or data we may have overlooked. It is important to remember that public involvement is not a vote counting process. The Forest Supervisor must make the decisions based on facts, resource data, and professional judgment.

Input No. 4 - Ira Spring

A. "Virtually nothing is said about the growth rate of trees at various elevations (the only reference is related to soils and how tall the trees grow). As much of the proposed timber cutting is at an elevation of over 3,000 feet and in an area of heavy snowfall, tree growth is a problem. A statement is needed on how long it will take for a tree to reach a merchantable size."

Response - The rate of tree growth does vary by elevation, depending upon the species, soil, and climate. These factors are considered in classifying the land into various site classes which are a measure of the relative productive capacity of a site. As a general rule, the site class could be expected to indicate less production as elevation increases. There are exceptions, for instance some species such as mountain hemlock and silver fir grow better at elevations of 3000 - 5000 feet on this Forest than at elevations below 1,000 feet.

The Timber Management Plan for the Gifford Pinchot National Forest projects several rotation ages. The rotation age for high elevation species (Pacific silver fir, noble fir, and mountain hemlock) is 140 years, the time needed to produce trees averaging 12 inches in diameter. In other areas the rotation age depends upon the silvicultural treatment used. Where commercial thinning only is applied the target diameter is 17.2 inches in 120 years. Using precommercial thinning only the target is 19.4 inches in 100 years. Where precommercial thinning and genetically superior stock are used the target is 20.9 inches at 90 years.

B. "It (the Draft Statement) does not point out that the Shark Rock roadless area (No. 309) is the focal point of six contiguous roadless areas, three of which are outside this study area. Although the one large roadless area was divided into six parts, it can only be studied as one unit."

Response - We agree that the Draft Statement, under Planning Unit Description, did not adequately cover this point. That section did, however, on page 13 refer to a map of the contiguous roadless areas No. 308, 310, and 311. No. 311 was omitted from the above map because we did not consider it to be pertinent to consideration of the Shark Rock area. Since the Clear Creek Draft Statement was published we have delineated three Additionally Identified Areas, these are included as Nos. 337 and 344 in this Final Environmental Statement. We have added wording which should more adequately cover your concern.

Input No. 5 - Pacific NW Chapter, Sierra Club

A. "Lewis River. This is uncontestably a very beautiful river. It should be treated as a candidate for classification as a National Scenic River from the forest boundary to the Mt. Adams Wilderness."

Response - This has been considered. Please refer to page 44 of this statement for our discussion of the subject.

B. "We support Forest Service plans for relocation of the Lewis River Trail upstream, but we also recommend that the trail be extended downstream from the present trailhead to a junction with the proposed Clear Creek Trail and thence along the Muddy to a trailhead on Road No. 125."

Response - Our current plans do include a proposed trail as you suggest to tie in with the Clear Creek Trail. They do not, however, propose an extension to Road No. 125. Wording has been added herein to reflect this.

C. "Boundary Trail. While the existing plan (Alt. No. 5) gives landscape management protection to Trail No. 1, The Proposed Action shows (p. 116) retention standard only east of Elk Pass. The section between Elk Pass and Bear Meadow has only a partial retention standard, in common with the bulk of the Planning Unit. This is not acceptable treatment for this important trail route. The entire Boundary Trail deserves the best possible visual quality protection."

Response - The difference in quality objective is due to changes in variety class. East of Elk Pass there is much more variety in the form of openings, rock outcrops, variations in vegetative species and sizes, etc. To the west there is little variety, the topography is not as rugged and the vegetation is primarily a mature conifer forest. Under the Visual Resource Management System one of the objectives would be to provide additional variety. Management activities such as timber harvesting can help to accomplish this objective. The visual quality objectives would be considered in planning any activity, including timber harvesting.

D. "This trail (No. 3) between Wright Meadow and the Boundary Trail is shown on the map of Alternative No. 1 (p. 29). It lies for the most part in the proposed Shark Rock Special Interest Area, but about one mile of the trail lies between the latter and the Wright Meadow Wildlife Habitat Area. We urge that this section of the trail be kept open and that the Final EIS have a statement to this effect."

Response - The trail will be retained from the Wright Meadow area to Trail No. 1 in the proposed Shark Rock Scenic Area. Our current plans for this trail include closing Road No. N923 near the northeast corner of Section 35 to public travel after the Blue Timber Sale is closed. The road would be reopened periodically as needed for future management. From the point the road is closed Trail No. 3 will be relocated to tie in with Road No. N923, just outside the proposed addition to the Shark Rock Scenic Area. Between this relocated portion of the trail and Wright Meadow the trail passes through several clearcut areas. Here timber management is a part of the objective and timber harvesting would be evident along this portion of the trail.

E. "In the case of special areas (visual, wildlife, water) the statement is made (pp. 37, 39, 46) that "less than full timber yield" will be obtained. The Forest Service has given precise figures for potential yield (34.1 MMBF) and actual programmed harvest (23.6 MMBF). Thus the Forest Service has precise figures for the percentage of full yield used for each of the special areas. These figures should be given, at least as a range of values, for each of the special classifications. This could also be given in terms of the proposed rotation ages. (The figure of 175 years is given in the current plan on pp. 90-91).

Response - This information has been added for each alternative under the timber descriptions.

F. "A grave inadequacy of this draft EIS is the failure to discuss the unavoidable loss of scenic beauty and roadless recreation opportunities under the Adverse Environmental Impacts of The Proposed Action."

Response - Any management activity which changes the human environment will produce impacts upon that environment. Whether those impacts are favorable or adverse depends upon the reader's point of view. We are interested in that point of view and have restructured the Environmental Impacts section.

G. "We agree with the statement on page 52 that the effects of soil and nutrient losses due to logging and slash disposal are unknown. However we disagree with the confident statement that these losses can be offset. There is no evidence that all soil losses, e.g. nitrogen, phosphate, potassium, manganese, magnesium, trace elements, etc., can be repaired artificially. If the Forest Service has such evidence, the reference should be cited."

Response - We agree the statement is more confident than it should be. The paragraph has been reworded. The specific items you mention, i.e., nitrogen, phosphate, etc. can be replaced by fertilizers provided we know the amounts existing in the soil before it was disturbed. Other items, such as organic material, including micro flora and fauna, cannot be immediately replaced since they must rely upon natural processes.

Input No. 8 - Thomas Horobik

A. "A major concern of mine relates to the existence of several inventoried roadless areas in and adjacent to the Planning Unit. Specifically, I am concerned about the apparent lack of established criteria used to determine the boundaries of the roadless areas. If two or more roadless areas are contiguous, with no developed corridor separating them from each other, why have they been inventoried as separate roadless areas? Is separation of roadless areas for reasons other than previously developed lands justified by the enabling legislation? For example, what justification exists to allow a roadless resource to be divided due to differences in topography, geomorphology, or ecological land units? If such separations are specifically permitted, I would appreciate your confirming the source as I have not been able to discover such authority within the roadless inventory, the National Environmental Policy Act or anywhere else."

Response - All direction issued for the Roadless Area Review was from within the Forest Service. Such direction did not specifically authorize nor specifically prohibit the division of Roadless Areas. The divisions used by the Gifford Pinchot National Forest were originally selected to facilitate discussion of specific blocks of land. For instance, since the Shark Rock Scenic Area already existed, it was thought better to leave it as a separate entity rather than combine it with another area. These decisions were made prior to the necessity of preparing environmental statements for proposed activities within a Roadless Area. It is possible

that Roadless Area boundaries and divisions between them would be different if the inventory process were being done today instead of in 1972.

B. "Of further concern to me is the treatment given the soils resource in the proposed management plan (Alternative No. 1). According to the data given it seems that only roadless logging techniques would be required on 23,540 acres rather than 12,250 acres as indicated on page 28."

Response - The 23,540 acres mentioned is the total number of acres on which road construction is either unsuitable or would be limited due to soil considerations. The criteria for designating these classifications are not the same as those used for classifying the 12,250 acres which would require suspended logging methods. Indeed, there is considerable overlap, particularly with those areas unsuitable for road construction. We have added two maps to the Appendix which should more clearly explain these relationships. The maps are titled - Loggability Guidelines, and Road Construction Guidelines.

Input No. 9 - Burlington Northern Railroad

A. "We believe the DEIS could be enhanced by the addition of small scale Forest maps which (1) illustrate the relationship of the Clear Creek Planning Unit to the other 15 planning units mentioned on page 9 and (2) illustrate the location of existing wilderness or proposed wilderness study areas on the Forest or any other existing or proposed classified areas."

Response - We have added a map of the Planning Units as suggested in (1). Those areas mentioned in (2) are shown by map and described in the text if they are within or adjacent to the Planning Unit being discussed. For the Forest as a whole, such data is contained in inventories and plans such as the Roadless and Undeveloped Area Final Environmental Statement, Ranger District Multiple Use Plans and the Forest's Timber Management Plan, as well as in various published maps and brochures made available to the public.

B. "On page 34 it is proposed that a 110 acre roadless area on BN land be kept around Curtis Lake. The statement is unrealistic as roads nearly surround the Lake and come to within 300 feet from the shore line. Logging already exists approximately one-quarter mile from the Lake and more will undoubtedly occur since the timber is under contract to IP. No land exchange involving this parcel is deemed feasible in the near future due to its potential geothermal value and contractual obligations. This proposed set-aside should be deleted from the plan."

Response - It has been deleted. Refer to our response to Comment L, under Input No. 12.

C. "On page 44, Wildlife, the third paragraph discusses the decline in the number of snags and dead-top trees. This statement is incomplete without reference to specific wildlife needs."

Response - The decline in the number of snags and dead-top trees is a concern discussed in a recent Region 6 Forest Service policy statement. The objective of this policy is to preserve enough snags to perpetuate all snag dependent species on a Forest-wide basis. The numbers and types of snags needed will depend on the area and species present. These wildlife needs are to be determined on a Forest basis and will include the Clear Creek Planning Unit when completed.

D. "On page 50 the first paragraph should explain there is no evidence that wood smoke is harmful to public health in the volumes generated by these controlled slash fires."

Response - We have added a discussion on the effects of smoke generated in slash burning.

E. "Also on page 50, under Alternative to Broadcast Burning, please add "improve utilization to decrease the amount of residue left in the Forest."

Response - Similar wording has been added.

Input No. 12 - U.S. Department of the Interior

A. "While approximately 6,100 acres of the Planning Unit are considered suitable for developed recreation sites, we are concerned that the document does not provide a time frame for recreation development."

Response - All Forest Service activities are dependent upon budget allocations approved by Congress for funding. There is no way the Forest Supervisor could determine at this time just when Congress would fund any of the recreation developments described in this environmental statement. Preliminary budget information for fiscal years 1976 and 1977 include no recreation development in the Clear Creek Planning Unit.

B. "It is our understanding that full timber yield will be realized on 51,840 acres of the Planning Unit. Since clearcutting is to be the most common practice used, we believe the Forest Service should discuss the impact of timber management activities on scenic resources in Chapters II, III, IV, and V."

"The Forest Service has pioneered in the inclusion of landscape management when preparing plans for timber harvest on specific management units. We are concerned that this experience has not been utilized in the subject statement. Several Forest Service publications deal with various landscape management techniques."

Response - Refer to pages 38 and 39 in the Draft Statement for the Clear Creek Planning Unit for a discussion of the Visual Resource Management System as it would apply to this unit. As is true with some other reference documents cited, these publications are not published as a part of the Planning Unit Environmental Statement due to space and economic considerations. This in no way means those documents would not apply to management of the Unit.

C. "A discussion of past harvesting practices involving 500,000 MBF and the effects on soils, water quality, wildlife and reforestation of the harvested areas would improve the statement."

Response - Refer to our response to Comment C, under Input No. 24.

D. "In general, the statement needs more specific, quantified descriptions of impacts on fish and wildlife. More emphasis could be given to the importance of old growth timber to species such as the northern spotted owl and the dependence on snags of cavity-nesting birds such as woodpeckers, nuthatches, bluebirds, and wrens. Also, it is difficult to assess if adequate areas have been assigned to various uses such as Wildlife management and Wilderness when the EIS covers only a small area of the total national forest. A table or short section should be included listing the proposed areas and acreages for each classification in the whole of Gifford Pinchot National Forest."

Response - One of the difficulties of attempting to decide how many areas should be allocated to wildlife, particularly for non-game species, is the lack of research on the amount of habitat required for each species and a clear direction on the number of such animals and birds desired by society. As of January 1, 1975, there were 126,600 acres dedicated to nonconsumptive uses on the Gifford Pinchot Forest that would provide essentially nondisturbed habitat. The Clear Creek preferred alternative would add approximately 8,220 acres. One of the functions of Unit Planning is to identify those areas that have the most desirable characteristics for wildlife habitat.

E. "Page 25, Visual. This section should describe the existing visual resource including scenic quality, geologic features, land forms, vegetation, water, etc. The description should cover what people come to see or will see when they are there and what features are not acceptable in existing scenery. The photos on page 5 to 9 do not provide an adequate evaluation of Visual Resource Management."

Response - We agree that the visual resource is important. However, the value each viewer assigns to a particular landscape varies widely. Rather than describing the visual qualities simply by subjective terms we have tried to describe the specific factors you mention under such headings as topography, vegetation and climate, fire history, inventoried roadless and undeveloped areas, water, etc. As is true throughout the Environmental Statement we have tried to avoid repetition by repeating the same statements under several headings. The 7,000 acres referred to on page 25 as highly scenic are nearly all within retention and partial retention visual quality objectives. They are located largely in the Shark Rock area, along Clear Creek, around Meta Lake and in the Lewis River canyon. We have redefined the visual resource qualities herein.

F. "We do not agree with the statement on page 31 that, "The Proposed Action will serve to maintain the opportunity for discovery of additional sites. . ." Though perhaps true for lands which will remain undisturbed, it definitely is not true for lands which will remain undisturbed, it definitely disturbing activities. For clarification purposes, we suggest the following be added at the end of this paragraph:

"Prior to initiating any ground disturbing project resulting from this plan, a reconnaissance or more intensive survey, if necessary, will be conducted to identify historical and archaeological sites or areas."

This statement was taken from your page 41, Discussion of Impacts."

Response - We agree, these changes have been made.

G. "Page 34, last paragraph - The Boundary Trail No. 1 borders an area designated for timber harvest. Since this is a ridgetop trail, a brief discussion of the visual effects of timber harvesting on scenic viewing would be appropriate."

"Pages 36-38, Timber - Clearcuts, as they appear in the photographs on page 5 and 6 are quite severe in their visual impacts. It is true these are old clearcuts and not necessarily the trend that future clearcuts will take. However, the final statement should indicate that consideration will be to modifying the shapes and sizes of cleared areas in accord with the Forest Service's Visual Resource Management System."

Response - It is true that Trail No. 1 does border a Timber Management Area. It is also, except for about one-half mile, within retention or partial retention visual quality objectives as shown by the map on page 116 of the Draft Statement. The visual quality objectives would be considered whenever timber harvesting, or other activities are proposed along this trail. Page 124 of the Draft Statement gives a brief summary of the degree to which the landscape in each quality standard may be altered. The management practices used to meet the various quality objectives might include adjustments in the size, shape, and location of any openings to be created. It would also include the use of screening through use of either vegetation or topographic features. Visual management does not automatically mean a reduction in timber yield even within some areas of the retention quality objective.

H. "Page 41, Environmental Impacts - The section on environmental impacts has little quantification, in many cases and the exact environmental effects of the various proposals cannot be easily identified."

Response - We believe we have quantified all of the resource outputs and environmental impacts which we can reasonably measure or estimate at this level of planning. Many questions will be answered later when specific projects are proposed, such as individual roads, timber sales, recreation developments, etc. Indeed, some questions which might be asked may not be answered by this generation.

I. "It is stated that The Proposed Action will contribute both to recreation and timber aspects of the local economy. The next paragraph says the timber harvesting will have a measurable impact on the local communities. Both statements are undoubtedly true. However, quantification of these impacts might help. An estimated number of man-years direct employment, necessary to accomplish the various activities of forest management, would be one indicator, also a consolidation of visitor days relating to recreation lends quantification to the impact assessment."

Response - When we say the Land Use Alternative will contribute to the local economy, and timber harvesting will have a measurable impact on local communities, we are speaking in relative terms. These effects will be much more significant within the local so-called "dependent communities" than they would be in the more distant metropolitan areas such as Portland, Oregon. For instance, the timber harvested from a particular Planning Unit would constitute a large percentage of the raw material needed by mills in nearby communities, while the same volume of timber would be almost insignificant in a marketing center such as Portland.

An estimate of the recreation visitor days are shown for each alternative in the Draft Statement. In addition, we have added a summary of the distribution of timber harvested by county over the last five years. This is included in the Social and Economic description of the Planning Unit. Also added is an estimate of the administrative cost by alternative. This may be found under the Social and Economic Environmental Impacts. To estimate the number of man years in direct employment to accomplish the various management activities as you suggest is, we believe, beyond the scope of this level of planning.

J. "Page 44, Wildlife - The final statement should provide quantitative information to explain the statement that "roads and other construction projects will remove a certain amount of the Planning Unit from wildlife habitat."

Response - We agree, data has been added to cover roads. We estimate the average road to be constructed in the Clear Creek Planning Unit would remove about five acres per mile from wildlife habitat and timber management. We have no reliable way of estimating at this time how much would be removed from wildlife habitat by projects such as rock pits, recreation sites, geothermal development, etc. Some of these areas could be rehabilitated over time while others would provide habitat for different species.

K. "Pages 45-46, Social and Economic - Timber harvest and road construction are described as favorable environmental effects. This appears somewhat justificatory when related to timber production goals. The final statement should consider the effects of these activities more objectively."

Response - It is not our intent to portray timber harvesting, and road construction as purely favorable impacts. We do believe that they would enhance portions of the social and economic environment. These are the points we have attempted to make under Favorable Environmental Effects. On the other hand, there are some aspects of harvesting and road construction which we think tend to have an unfavorable effect on the human environment. These are listed by various headings, Air, Soils, Water, etc. under Adverse Environmental Effects Which Cannot Be Avoided in the Draft Statement.

L. "Page 47, paragraph 3 and page 100, footnote - The timber harvesting level for the Proposed Action and Alternatives 2, 3, and 4 appears to include timber volume from 2,000 acres of private land (page 100, Table 100, footnote), however on page 47 the statement is made that "No firm proposal for acquisition has been made." The rationale for including the volume from these lands should be discussed."

Response - At the time the Draft Statement was published we assumed that the Forest Service would acquire the private land in the future. As a long range plan we felt we should describe the management activities to occur on these lands after acquisition. Since publishing the Draft Statement we have decided not to include outputs from other than Forest Service lands unless the acquisition is imminent. The change is reflected herein.

M. "Page 49, Wildlife and Page 52, Vegetation - The statement that harvested areas will provide grasses, low brush, berries, and similar vegetation for several years conflicts with the statement on page 52, last paragraph, that refers to herbicide spraying projects to combat brush encroachment on recently harvested areas."

Response - We agree that these statements appear to be in conflict. We have added wording for clarification. Most recent clearcut areas on this Forest do support significant stands of grass and other low browse plants. Brush spraying would only be used in those harvest areas with severe brush problems. Even in those areas to be sprayed most brush plants would not be killed. Typically the younger growth on the plant is affected and the plant usually continued to grow the next year. The objective is to slow the brush growth until the trees are able to outgrow it.

N. "Page 49, Logging slash and page 52, last paragraph - It is stated that logging slash left on the ground provides good cover and protection for many small birds and mammals. This conflicts with the statement on page 53, first paragraph, that suggests logging slash and debris must be burned or removed because it is a fire hazard."

Response - We have changed the wording to eliminate this apparent conflict. Abatement of the slash hazard means to reduce the fire hazard to an acceptable level. In practice the slash is never totally removed.

O. "Page 52, paragraph 3 - The adverse effects upon tree regeneration is mentioned, but the severity of the problem is not quantified."

Response - On page 25 of the Draft Statement regeneration potential is shown for the Planning Unit. The dry soils described on page 52 are a part of those 22,360 acres with a low regeneration potential. For more detailed information the reader is referred on page 52 to the Soil Resource Inventory.

P. "The glossary definition of Visual Resource Management System appears to be a discussion of what should be done and not what actually will be done, which would be of more interest to the reviewer."

Response - At this level of planning, only a general statement is possible. The visual factor will be treated as a resource. As with other resources its application will be negotiable when on-the-ground planning is done for specific projects.

Input No. 13 - Karl W. Jansen

A. "Why build new trails when the existing ones aren't kept up? There is nothing more aggravating than planning a hike, only to spend all the time allotted just trying to find a trail where logging has obliterated it. Aren't there any provisions for loggers to put a trail back after logging over it?"

Response - Many of our present trails were originally designed to serve administrative use and not recreation use. We need to identify where future recreation trails are needed to ensure the basic trail corridor will be available when money becomes available to upgrade the trail system. Present regulations allow for loggers to replace trails following operations.

Input No. 16 - Washington Department of Game

A. "A notable adverse impact of the proposed plan is its removal of all inventoried roadless and undeveloped areas from wilderness status consideration (see page 101). An alternate plan is presented which appears to include many of the features of the proposed plan, while maintaining a wilderness option-Alternative Plan 2 (pages 58-68). However, adverse environmental effects associated with Alternative 2, are not discussed in a detailed manner. Therefore a firm foundation is not provided on which to base a decision whether Alternative 1 or 2 would result in least adverse environmental impacts while accomplishing major project objectives."

Response - We believe the adverse effects for both Land Use Alternatives are treated in the same manner and to the same depth. The adverse effects of Alternative No. 1 began on page 50 of the Draft Statement, while those for Alternative No. 2 started on page 66.

B. "Herbicide spraying projects are suggested as a means of combating brush encroachment (vegetation subsection, pages 52-53). A discussion of the effects which such spraying has on other natural resources (water quality, wildlife, etc.) would be appropriate and is recommended. Similarly a discussion is needed of other methods which could be used to minimize adverse effects while accomplishing the same objective (i.e. tree production).

Response - On pages 53 and 54 of the Draft Statement we mentioned that clearcuts could affect water quality. We also stated that before chemicals are used an Environmental Statement is required. The most recent statement covering the Gifford Pinchot National Forest was filed with the Council on Environmental Quality February 13, 1976. The detailed information you request is contained in that statement. Immediately before actually spraying the Forest Service Regional and Forest Offices use the media to inform the public that we are proceeding with spraying authorized by the Environmental Statement.

C. "You indicated in the "Wildlife" subsection that no detailed wildlife management plan has been made for the Clear Creek Planning Unit. An indication of when this plan will be prepared would be appropriate."

Response - There will be no single wildlife plan completed at any specific time, rather wildlife habitat management will be refined and applied on a continuing basis within the general framework of the approved Land Use Plan for a particular Planning Unit. Elk habitat and snag management plans are currently being developed on a Ranger District basis. Representatives of your agency at the local level have been, and will continue to be, involved in aiding us in developing these plans.

Input No. 18 - Skamania County Commissioners

A. "We favor Land Use Alternative No. 1 for this Planning Unit, except for the unroaded area along Clear Creek. We recommended a portion of this unroaded area, as shown on the attached map, be classified Marginal Commercial Forest Land. We do not feel that area should be classified Unroaded because of the steep ground, rock bluffs and rock outcrops. We recommend the forest consider special logging techniques, such as long distance skylines to harvest timber in this area."

Response - In reviewing this area, just west of Spencer Butte we found that of the total 770 acres involved 150 acres are nonforest/unproductive and the remainder is productive forest land supporting mostly second growth conifers of small sawtimber size and smaller. The largest block, 300 acres, is of pole size. Also, 340 acres is within the Retention Visual quality objective, and suspended logging methods would be required on about one-half of the area. Considering these facts and other data such as public input, the Forest Supervisor decided to retain the Unroaded Area boundary as it appeared in the Draft Environmental Statement.

Input 23 - John Allinger

A. "Detail should be provided on how the final management plan for this Planning Unit will be implemented. I understood the FES of this plan along with the Land Use Planning Team's data, including maps, would be utilized by the District Ranger's staff in managing the resources in the area covered by this plan, and this data should be referred to as part of this plan."

Response - Your understanding is correct. The information contained in the Final Environmental Statement, when approved, will be a part of the Land Use Plan. At the time it is given to the District Ranger for implementation it will be accompanied by numerous data overlays, various photography and additional specific guidelines for implementing the plan in accordance with the approved Final Environmental Statement.

B. "The protection of the Meta Lake area as proposed is good. I wonder if this area shouldn't be completely protected pending completion of Wilderness suitability studies of the Mt. Margaret Candidate Wilderness Area. I cannot help but believe that surrounding areas (roadless) contributed evaluation points that helped qualify the Mt. Margaret area for Wilderness study."

Response - We have added the area including Meta and St. Charles Lakes to the Roadless Area Review as Additionally Identified Area No. 344.

C. "Page 33-35, Recreation - The level of development of campgrounds and picnic areas should be specified."

Response - The degree to which each recreation site would be developed would be determined when on-the-ground site planning is done. All proposed sites specifically referred to would be road accessed.

D. "Pages 38 and 39, Visual - Reference should be made to the exhibit showing these Visual Resource Management System areas for this proposed plan."

Response - We agree this point needs clarification. We have added wording in the Glossary under Visual Resource Management System for this purpose. Since the inventory of visual quality objectives depends upon seen areas from specific travel routes it is not possible to make an accurate inventory for each land use alternative without knowing exactly where each future road and trail will be. Such locations are beyond the scope of our long-range planning as described herein. The map of Visual Quality Objectives in the Appendix applies only to existing travel routes.

E. "Which streamside management unit goals apply to which stream? Is a map in order to display this information also? I think so."

Response - For purposes of long-range planning we believe the most significant point is the division between Class 3 and 4 streams. Protection of Class 1 and 2 streams would have a much greater impact on management practices than on Class 3 and 4. As mentioned on page 118 of the draft statement, under Management Area, the Class 1 and 2 streams are those shown by the symbol for Water Quality Protection. This applies to all alternatives except No. 5.

F. "Specifically what type of wildlife habitat management is proposed for the area along the Lewis River, Trail #31, and Road N90?"

Response - The wildlife habitat shown in the area you refer to represents deer and elk winter range. As stated on page 40 of the Draft Statement the major objective would be to avoid degrading that habitat. Through management we might be able to improve the quality. Some of the specific practices we might apply are:

1. Use smaller timber harvest areas than are normal.
2. Schedule timber harvesting to obtain the optimum balance of feed and cover without causing a reduction in timber harvested.

In addition the area is almost entirely within the Retention Visual Quality Objective which means the basic character of the vegetation must not be altered. This will require that the timber harvest rotation age will be about 190 years.

G. "I understand the Forest Service will announce a snag policy soon. Should a statement as to its applicability and affect on certain lands be a part of this plan?"

Response - We have added wording concerning the snag policy.

H. "Would it be possible to announce the completion of environmental analysis of a road project where this analysis reveals possible significant impacts or recreational or scenic values? A policy statement to this effect would make an excellent addition to this part of the proposed management plan."

Response - The Forest Supervisor has the responsibility to prepare an Environmental Statement if an Environmental Analysis Report reveals significant impact upon the environment or is highly controversial. What constitutes a significant impact on visual or recreation resource may vary from individual to individual. For that reason we publish, each year, a program listing all activities, particularly timber sales, planned for the next five years. Also, we encourage individuals to obtain such specific information from local District Rangers for any project for which they are particularly interested.

Input No. 24 - Sierra Club, Pacific NW Representative

A. "Page 17 - The discussion of trails does not cover present maintenance or motorized use."

Response - Motorized use is allowed on all existing trails within the Planning Unit. As stated herein, motorized use would be prohibited along the proposed Clear Creek Trail above Road No. N920. We do not believe a discussion of present trail maintenance, which may vary from year to year, is pertinent to developing a long-range plan for land use allocation.

B. "What effect will two new mills have on the already unreasonable industry pressure on public lands for timber harvest in the area?"

Response - The two mills mentioned on page 21 are being built by Weyerhaeuser Company. At the present time the company is not purchasing timber from the Gifford Pinchot National Forest. The demand for timber from public lands will continue to be more dependent upon the nation-wide demand for wood products than upon the location of any particular mills.

C. "Page 23, Soils - A map is needed. The entire unit appears to have severe soil erosion potential. The effects of past development and activities should be discussed."

Response - We agree that a graphic display of soils data is needed. We have added two to the Appendix. They are: Timber Harvest Guidelines and Road Construction Guidelines. Both of these are recommendations for on-the-ground development and reflect a number of soils characteristics, including areas of severe soil erosion potential. For more detailed information refer to the Soil Resource Inventory.

Some of the past management practices are unacceptable today. Many were, however, fully acceptable at that time. Indeed, the more detailed long-range planning described by this environmental statement is a direct result of the Forest Service needing more effective planning tools. We do not feel that discussion of past practices is relevant to future land use allocation, except as the results are being used to improve our management practices.

D. "Page 24, Timber - It is obvious that in past years the harvest exceeded the present allowable cut by a considerable amount; why was this allowed to happen?"

Response - The allowable cut you refer to is, and has been, allocated by Ranger District. There has never been an allocated cut by Planning Unit. Timber sales are located largely on the basis of needed silvicultural treatment and may occur in any part of the District. As planning becomes more intensive in the future, the harvest may someday be allocated by planning unit. There are no such plans now. As a matter of interest if we assume harvesting began in 1958 as stated on page 24 and about 500 MMBF has been removed during the 17 years (1958 through 1974) the average yearly harvest is 29.4 MMBF per year. In comparison the current Timber Management Plan, represented by Alternative No. 5, would produce 28.6 MMBF.

E. "P. 26 Wildlife - Where do the Osprey nest? Where do the elk summer? Why is there no more data on any other species than elk? Why has there been no survey for endangered or unusual species? What is the history of the fisheries resource during the recent developmental period? What size are the fisheries?"

Response - The only active Osprey nest we know of in the Planning Unit is on private land in the southwest corner of the Unit. Elk summer throughout the Unit, particularly near open areas and at the higher elevations. Data is given for elk because it is the species which has the greatest impact on the Unit from a land use planning standpoint.

In the process of gathering data for this Planning Unit in 1971, a Wildlife Biologist, a member of the Forest's Land Use Planning Team, spent several weeks on the ground. No threatened or endangered species were identified at that time and none have been since. In the event such a species is identified we would initiate a detailed survey to make positive identification, determine the population size and location, and to recommend appropriate steps to provide adequate protection. We are not certain exactly what information you are referring to for the fisheries resource. However, we have little detailed information on this resource.

F. "P. 31 1st para. - What is the proposed water quality monitoring program?"

Response - Our non-point source water quality monitoring program establishes a network of baseline and project stations. Data collected at these stations will be used to evaluate the physical, chemical, and biological quality of National Forest waters. These stations are being installed under this ongoing program as funds are made available to the Forest.

Baseline stations are being established on the principal watersheds and located at or near the National Forest boundary. These stations will characterize current water quality conditions, monitor the cumulative impacts of land management activities, and detect trends in water quality.

Project stations are established to monitor the impact of an individual land management activity and water quality, e.g., road construction, timber harvest, forest fertilization, herbicide spraying and slash burning. Project monitoring will determine if State and Federal water quality standards are being met and will provide information that will be used in planning and designing future projects.

- G. "Page 31(a) - Was there any attempt to search for archaeological sites?"

Response - Refer to the section on Historical and Archaeological under Description of the Planning Unit. Item 5. discusses this subject.

- H. "Why aren't streambeds to be withdrawn now from mineral entry?"

Response - The present mining regulations allow the Forest Service to protect the environment during mineral exploration activities. We are reluctant to withdraw large areas from mineral entry until we have more complete information on the mineral resource. Such a determination is beyond the scope of this planning level.

- I. "Page 34, Paragraph 3 - Please show proposed recreational sites on one of the maps."

Response - All three sites mentioned are shown on the map on page 29 of the Draft Statement. The symbols are difficult to see and we have changed the printing process to improve the clarity of all maps shown.

- J. "Page 34, Paragraph 5 - What effect will logging the area have on Trail No. 30?"

Response - The trail is roughly the eastern boundary of a proposed Unroaded area, with no planned timber harvest for about two-thirds of its length. It is entirely within an area of visual quality objective-retention. To meet this objective any management activity viewed from the trail (within the retention area) would not be evident to the casual forest visitor as indicated on page 124 of the Draft Statement. Timber harvesting would be acceptable, but any holes created in the canopy should not be recognizable as a harvest area. The viewer would not be able to see large numbers of stumps and concentrations of slash for instance.

- K. "In view of soil conditions and limited trail maintenance monies, what justification is there for any motorized use?"

Response - Motorized trail use, on selected trails, is a part of the total recreation opportunity of the Gifford Pinchot National Forest.

- L. "Will there be an attempt to segregate incompatible uses?"

Response - At the present time the amount of use in this Planning Unit does not require segregation of uses. If the amount of use should significantly increase over the next few years, then a separate plan of winter recreation use would be required.

M. "Page 37, 1 - If 90% of the timber stand is overmature, what does this say about the regeneration and growth on lands harvested in the last 25 years?"

Response - There may be some misinterpretation of this percentage, we have added wording for clarification. What was meant in the Draft Statement was that 90% by volume of the existing stand, as was indicated on page 24, was overmature. This would be found on 64% of the total acreage of the Planning Unit. Regeneration and growth in this Unit are about average for the entire Gifford Pinchot National Forest.

N. "Page 38, 3 - Why is noble fir the chosen species at higher elevations. Is it only because noble fir will do well in even age management? What is the average species composition of old growth stands harvested at higher elevations? What is the average species composition of the regenerated stand?"

Response - Noble fir is a high value seral species. It grows well on a wide range of soils if ample moisture is available. It is an intolerant species and has about the same sunlight requirements as Douglas-fir for reproduction. Insects are not usually a serious threat to this tree, however, the Noble fir bark beetle commonly kills it. It is very resistant to damage from snow, ice or cold and is more resistant to frost than Grand Fir or Pacific silver fir.

The species compositions vary by habitat at the higher elevations. Generally speaking Pacific silver fir and western red cedar constitute the climax species. The major seral species are Grand fir, Noble fir, Englemann spruce, western white pine, Douglas-fir and western hemlock. Minor seral species would be sub-alpine fir, western larch, lodgepole pine, and mountain hemlock.

Regenerated stands will favor the seral species of each habitat. The objective of reforestation is to plant the major seral species, which with the results of natural seeding, will produce a mixed species stand.

O. "Page 41, para. 8 - If this 'sanitation and salvage logging' is to be accomplished without roads, how will this remove the area from consideration for protective classification?"

Response - By protective classification we assume you mean Wilderness. Over a period of time, depending on how much timber might be removed, we believe the remaining stumps, slash and other signs of man's hand would at some point in the future cause the area to be unsuitable for Wilderness as the Forest Service currently interprets the Wilderness Act in the West.

P. "Page 42, paragraph 9 - How will the proposed action contribute to the recreation aspects of the local economy? Due to the considerable degree of development already present it is very doubtful if any more road oriented recreation can be attracted and the action will certainly reduce the roadless recreation."

Response - The statement referred to was not intended to imply either an increase or decrease in a specific type of recreation. As stated, we believe the Unit would continue to contribute.

Q. "Decreasing mean age of the timber stand, changing the species composition, and the general disappearance of brush species in some areas are not covered."

Response - We have added wording to make it more clear that the mean age will decrease. A change in species composition was mentioned under Vegetation on page 43 of the Draft Statement. It is true that as timber harvested areas are reforested and the new trees grow, they will eventually shade out most of the grasses and low growing brush. However, if the area were not harvested few of these low species would be found under a closed canopy of coniferous trees. A discussion of this subject may be found under Wildlife on page 49 of the Draft Statement.

R. "P. 44 Wildlife - None of these impacts are quantified. What species will be affected by the reduction in snags? Is harassment of wildlife due to improved road access possible or inevitable?"

Response - A list of species affected by any reduction in snags can be found in the recent Region 6, Forest Service Dead Tree (Snag) Management Policy. Refer to Appendix, page . Impacts upon these species would be considered when specific projects are proposed on the ground.

Undue harassment on wildlife does not inevitably occur because of a road. In most cases wildlife adjusts to vehicles and humans quite well. Where harassment is a potential problem, public access has been and would be limited or excluded as mentioned on page 55 of the Draft Statement.

S. "Page 45 Air - In light of the fact that road access is a factor tending to increase frequency of fires and most activity along roads occur during these same dry summer months is this really going to reduce summer smoke release?"

Response - We believe the tendency should be to reduce smoke during the summer months.

T. "Page 45 Fire - You admit here that more people would use the unit if the roadless areas were preserved, yet elsewhere you claim recreation benefits. How can this be?"

Response - Alternative No. 2 is not intended to equate more people with more roadless areas. This is a combination Alternative in that it maximizes primitive recreation where possible, while also maximizing dispersed recreation in the remainder of the Planning Unit. As shown by Table 6 on page 102 of the Draft Statement the additional use capacity is expected to be largely related to developed camping and picnic sites along roads.

U. "Page 46, 3 - What will be the allowable cut effect of this deferral of harvest? We note that there is no land stratified into the "deferred" class."

Response - We do not anticipate any reduction, or allowable harvest effect, to result. This statement did not refer to the deferred land class. For clarity we have changed the word deferred to delayed.

V. "Page 48, Soils - Admit increased soil movement due to planned development."

Response - We agree. The item referred to on page 48 of the Draft Statement is listed under Favorable Environmental Effects. Please refer to pages 51 and 52 of the Draft Statement for a discussion of the Adverse Environmental Effects on soils.

W. "Page 48 - Vegetation - The disappearance of old growth and the associated micro-flora is not covered."

Response - This is discussed in the Draft Statement in the following places: Vegetation, page 43; Wildlife, page 44; Social and Economic, page 46; Vegetation, page 48; Wildlife, page 49; Soils, page 51; Wildlife, page 54; and item 2, page 103. In addition, the Final Environmental Statement for the Gifford Pinchot National Forest's Timber Management Plan, 1975-1984 described in the Glossary covers this subject.

X. "Pages 48 and 49, Water - So which alternative will have the least net impact on water quality?"

Response - The following statement is made under Water, on page 65 of the Draft Statement, in describing Alternative No. 2:

"Impacts on water quality are potentially more favorable (under Alternative No. 2) than under any of the other alternatives as a result of less timber harvest, road building and slash disposal."

Y. "Page 51, Social and Economic - Are there no social impacts from the action? Is the disappearance of defacto wilderness an action of no social consequence?"

Response - The fact that some of these areas will not remain undeveloped is mentioned under Inventoried Roadless and Undeveloped Areas on pages 41 and 42 of the Draft Statement. No determination of whether this is either favorable or unfavorable is made in the Draft Statement. Since it is a highly emotional subject we believe it is best to leave the judgment up to the reader.

Z. "Page 52, paragraph 1 - The Forest Service should be commended on being completely capable of dealing with the unknown. I'd like, however, to see your reference for the assertion that you can deal with any soil nutrient or trace loss, even if it is unknown."

Response - Refer to our response to Comment F, under Input No. 5.

AA. "Page 52, 53, 54 - In general, there is no quantification of impacts. About all that is said is that there will be impacts - this is clearly insufficient."

Response - These are potential impacts. Our intent is to use land management practices designed to minimize these impacts. Refer to our response to Comment H, under Input No. 12.

BB. "Page 58 - The map for this alternative points out another shortcoming of the process of evaluating the roadless areas in the unit. If even the boundaries of the roadless area had been reconsidered, the map of the wilderness alternative would look different. In fact, most of Trail No. 3 is in defacto roadless area. This failure to check inaccurate data points out that serious consideration was never given to a larger wilderness or roadless proposal."

Response - The question you raise about Trail No. 3 depends to a large degree upon the reader's point of view. From a point in the southeast quarter of Section 26, west to Wright Meadow the trail is cut by a series of clearcut areas. The remaining mile of the trail, toward Blue Lake, was not included because of its proximity to the Blue Sale roads and cutting units. This sale was sold in December, 1968, but construction of the road did not take place until 1973.

CC. "Page 64, Social and Economic - How would this alternative de-emphasize water as a commodity?"

Response - Our statement as written was intended to list examples of tangible commodities. We have made it more specific by eliminating water and forage.

DD. "Pages 66-67 - Why is a reduction of 2.2 MMBF described elsewhere as basically having negligible economic impact, and a 5.8 MMBF reduction not described as the same?"

Response - Here again this depends upon the reader's point of view; we have not said whether this output is either favorable or adverse.

EE. "Page 102 - The data for "Hiking and Riding" is not credible. How many people prefer to hike or ride through clearcuts? What part of the unit can't now be reached in three hours on foot? The data for "Scenic Driving" indicates that building roads attracts cars. I question whether this is true granted the many miles of road already available in the National Forest and elsewhere. However, if it is true, the Alternative 2 should be adopted for energy conservation reasons. More driving of automobiles as a recreational activity should be discouraged."

Response - As is true of all outputs shown these figures represent the sustained carrying capacity for each resource use without damage to the other resources. They are not intended to reflect expected recreation demands at any point in time.

FF. "Page 104, 3 - What is going to happen to old growth dependent species?"

Response - As indicated under Wildlife on pages 49 and 54, those species dependent upon old growth timber types will be relocated as this potential range decreases through timber harvesting. As stated under Wildlife on page 40, suitable habitat for threatened and endangered species would be protected as those species are identified within the Planning Unit.

GG. "Page 104, 4 - How is this to be achieved if you can't keep N90 out of Alec Creek?"

Response - Refer to our response to Comments F and V, under Input No. 24. In the specific case you mention the road was damaged by an earth movement resulting from entirely natural causes high on the slope above the road. There has been no development in the area where this movement began. Our Soil Resource Inventory and other data will aid us in recognizing landscapes which may be unstable or highly erodable. This is not to say we will be able to avoid all such soil movements in the future. If roads cannot be located away from these areas we should at least know what construction methods will reduce the danger of accelerated erosion. In some cases it may be necessary to build roads across these areas, if the advantages in other resource uses are expected to exceed the potential soil and watershed damage.

HH. "Page 107, footnote - This is puzzling since nothing in that alternative (number one) is presently shown as wilderness. The identity of the various alternatives is confused apparently."

Response - This should read Alternative No. 2 rather than No. 1.

Input No. 25 - Oregon Environmental Council

A. "Your DEIS contains a lot of technical verbiage but unreasonably neglects the three biggest public issues on the Gifford Pinchot over the past several years — HORSE POLICY, MOTORBIKE POLICY and SNOWMOBILE POLICY. The unit plan and FEIS should contain details of policy implementation in these three areas. You know our feeling on them and it is not necessary to expound on it here."

Response - Refer to our response to Comment A, under Input No. 27.

B. "In other areas, the DEIS does not reveal all existing plans or current status of the land. Information on roads at least as detailed as on the current "Fireman's Map" information on timber sale, cut and regeneration should be included so one can surmise where roads are planned. The recently adopted regional fish protection policy should be referenced and implementation plans proposed in detail."

Response - The information you request concerning roads and timber sales is contained in the current (1976-1979) Five Year Timber Action Plan for the Gifford Pinchot National Forest. This information is contained in An Action Plan, published June, 1975. This publication is available from the office of the Forest Supervisor, Vancouver, Washington.

The recent Fish Habitat Management Policy is included. Specific implementation plans will be described on a case by case basis when specific projects are proposed on the ground. Such specific plans are beyond the scope of long-range land allocations.

C. "The summary of the DEIS should indicate that this proposed plan covers only a 10-year time frame."

Response - As we envision it there is no specific time frame covered by the proposed action. To be effective we believe the plan must be "alive". It must be responsive to changes in policy, resource data, public needs, national law, etc. Whether such changes are needed tomorrow or twenty years from now the planning process must allow adjustments to be made relatively easily.

D. "In the summary sheet, Section V, you state that "this plan would have a negligible change" on social and economic conditions of the area and yet 15 typed lines later you indicate that the "no change from the present" option was not adopted. In view of changed timber harvest amounts and development of currently roadless areas, we suggest that the "negligible change" statement is wrong and should be revised. From our viewpoint, one of the most important social characteristics of the regional area is the present existence of large unroaded areas useful for escape from urban pressures. The development of present roadless areas eliminates this not only for 10 years but for generations."

Response - The term negligible means different things to different people. What we mean here is that given the change in resource outputs from the present plan (Alternative No. 5), the Proposed Action, for the specific planning unit only, would have little measurable effect when compared to recreation and timber outputs for the region as a whole. As an example, the 1972 timber output from all ownerships in Washington and Oregon totaled about 17.4 billion board feet, and nationally about 52.3 BBF. We believe the 2.2 MMBF (in Draft Environmental Statement) change expected as a result of the Proposed Action in the Clear Creek Planning Unit is negligible.

As mentioned on page 56 of the Draft Statement we believe the no change option (Alternative No. 5) is too general to be an adequate planning tool for the future.

E. "The integration of the Clear Creek plan into a Forest or Regional plan is not substantively discussed. We have previously suggested a "connection" policy for foot trails between major outdoor recreation areas; the zones protected for such use should be identified in the plan as such."

Response - Page 1 of the Draft Statement described the Forest Service Land Use Planning System. It describes how unit plans, such as that for Clear Creek, are integrated into the National, Regional and Forest plans.

Unit Plans on the Gifford Pinchot National Forest will continue to contain limited information on proposed new trail corridors and the type of trail usage, whether for foot, bike or horse use. Executive Order No. 11644 directs the Forest Service as well as other Federal Agencies, to develop, by the end of 1976, a plan establishing where off-road recreational vehicle use is acceptable. The Gifford Pinchot National Forest expects to have its plan, covering the entire Forest, implemented by June 1, 1976. That plan will reinforce all planning units on which environmental statements may have been filed. Environmental statements for Unit Plans filed after that date will further refine the off-road vehicle policy. Unit plans as we perceive them are not sufficiently detailed to accurately locate each and every future trail or establish all guidelines needed to control use of those trails. Some of these decisions will not be made until more detailed transportation network plans are made sometime after the Unit Plan is implemented.

F. "The definition of planning unit boundaries has been a matter of concern to us for several years. We believe that from a roadless backcountry viewpoint, the present boundaries are artificial and detrimental to satisfactory analysis. In the past, a Quartz Creek roadless area has been suggested which includes part of the Clear Creek Unit. Your plan and FEIS should indicate that the present condition of land adjoining a large part of the Clear Creek Unit is eminantly suited for roadless area uses."

Response - Several factors were considered in defining the planning unit boundaries, some of the more significant were:

1. *The unit should be drawn on watershed, or drainage boundaries, since much data and transportation systems are collected or designed on this basis.*
2. *The boundaries were originally drawn to coincide with the boundaries of the Total Resource Inventory System. T.R.I. is a computerized resource data storage and retrieval system currently being installed on the Forest.*
3. *Maximum useable sizes of maps and other graphic materials used in our planning process limits the size of the planning unit. We believe a scale of two inches/mile is the best compromise for use at this level of planning. Typically an area of 100 to 150 thousand acres will require a map about three to four feet square. This is about as large a map as can be easily manipulated. It is also about the maximum that most reproductive laboratories can accommodate when copies are needed.*

Planning Unit boundaries could be drawn to match any of several particular uses. Drawing them to include entire roadless areas is one way. They might also be drawn to include all recreation areas of a particular type. From a timber management standpoint it might be desirable to use vegetative type lines for the boundary, etc. We believe the criteria we have used for delineating the planning unit is the most reasonable compromise.

To answer the second portion of your statement concerning the areas around the Clear Creek Unit suitable for roadless uses we refer to the map on page 114 of the Draft Statement showing all of the roadless and undeveloped areas adjacent to the Planning Unit, including Area No. 310 which includes the Quartz Creek drainage.

G. "A detailed fiscal analysis of timber monies flow is included in the DEIS but the corresponding analysis for recreational development/environmental controls is not presented. We know, of course, this comes to the USFS as annual appropriations. We believe the plan and FEIS should recognize this financing is an inappropriate way to protect and management these aspects of national forests. At best, it doesn't allow for long term capital planning - in practice it implies that the timber aspects of your land use plan will go forward much faster and more regularly than the environmental aspects of the plan."

Response - Some clarification appears to be needed. Nowhere in the Clear Creek Draft Statement did we mention dollar amounts appropriated for timber management. The dollar figures for timber outputs shown on pages 47, 67, 75, etc., are potential outputs expected if the various land use alternatives were implemented. We did not include similar data for recreation simply because we do not have reliable data, certainly not data that could be compared dollar for dollar with the timber outputs. For this reason we elected to illustrate potential recreation outputs based upon visitor day carrying capacity for each alternative.

As to the timber aspects of the plan going forward faster than some other aspects you are probably correct, at least for the foreseeable future. Based upon past Congressional appropriations, the Forest Service receives a far greater share of its annual budget requests for timber management than for such items as recreation, wildlife and watershed. This does not mean environmental aspects are ignored, protection of other resources is part of the timber management function.

H. "A general public problem in reviewing a DEIS such as Clear Creek is the lack of reference to more detailed information on many aspects of the plan. We suggest that the plan and FEIS include a clear reference to the studies, subject files and maps which support the plan".

Response - We have tried to list the major references, either in the body of the statement or in the Glossary. The Glossary in the Draft Statement described the following, and told where copies might be obtained or reviewed:

1. Land Use Classification
2. Soil Resource Inventory
3. Streamside Management Units
4. Threatened and Endangered Wildlife Species
5. Timber Management Plan
6. Visual Resource Management System

In addition to these references we have added a bibliography.

I. "Due to the difficulty of defining in words, terms such as "partial retention" and "Visual management", we suggest the use of photographs to show acceptable and unacceptable practices under this plan. We think for example, of the waterfalls in a clearcut just east of Road N92 (R. 6 E., T. 9 N., Section 29) as an unacceptable example. Another graphic example of unacceptable practices (or land use) is the sedimentation of the lower edge of a clearcut off Road 923 (R. 7 E., T. 8 N., Section 3) near Wright Meadows. The extent of compensating restitution for such past errors should be considered and defined in the plan and FEIS (same as "affirmative action" in civil rights cases)."

Response - The Visual Resource Management System contains complete definitions of these terms as well as numerous pictures depicting acceptable management practices. Page 124 of the Draft Statement for the Clear Creek Planning Unit explains where this document may be reviewed.

The waterfall mentioned is on private land. Concerning past practices refer to our response to Comment C., under Input No. 24.

J. "The DEIS should have included or referenced an evaluation of the pumice stone applications near Meta Lake. The nature and limit of present administrative controls to prevent such intrusions (and also Muddy Hydroelectric Project) should be discussed or referenced. We believe that alternatives to pumice stone exist which preclude the granting of permits for its extraction (refer Rock Mesa case in Deschutes National Forest). Indicate the Muddy Hydroelectric Project impact on the Cedar Flats natural research area and winter game habitat."

Response - Before any pumice stone could be removed we would prepare an Environmental Analysis Report, or possibly an Environmental Statement. If these claims are solid under applicable leasing laws and regulations, the Forest Supervisor would consider the removal based upon the EAR, or EIS. The Muddy Project is no longer valid since the Federal Power Commission has recently revoked the license application filed by Pacific Power and Light Company. Such a project would require a separate Environmental Statement before construction which would discuss the various impacts of that specific project.

K. "In the discussion of non-USFS uses, the suitability of the area for municipal water supply or transmission line site should be discussed and these uses precluded during the term of this management plan."

Response - No application for such development exists. At such time as a specific project might be proposed an EAR, or perhaps an EIS would be required. If a project were approved it would be designed to minimize impacts upon other resource uses.

L. "The existence of Wright and Spencer Meadows and the threats to their existence should be discussed (page 11).

Response - We have added brief wording to describe the existence of these meadows. We are not certain exactly what threats to their existence you are referring to, but we do not believe the description section on page 11 is the most logical place to discuss impacts. We feel that we have covered these in detail under each Land Use Alternative and the Environmental Impacts. For instance: Page 40 of the Draft Statement discusses buffer zones to be left around all meadows. Page 49 covers the loss of meadow areas as the result of tree encroachment. Both of these meadows are in the retention Visual Quality Objective and should therefore be managed to meet that objective.

M. "We suggest that the FES include an analysis of land use and respect for natural land values at areas in the Clear Creek Planning Unit heavily used for elk hunting."

Response - Executive Order No. 11644 and the ORV plan being prepared by this Forest is designed to eliminate unacceptable damage resulting from ORV use. Refer to our response to Comment A, under Input No. 27.

N. "How are road areas evaluated in timber management for the Planning Unit? If a road removes a 200 ft. width of land from timber production then 133 miles of road on the Planning Unit takes out over 3,300 acres from production. Alternative No. 1 proposes an additional 100 miles of road in the Planning Unit. Such a loss of 6,000 acres in a 76,000 acre Planning Unit appears unacceptably large. What is the regeneration potential of the land which constitutes these 233 miles of road?"

Response - According to our best estimate the amount of land removed from timber production by roads (existing and proposed) is about five acres per mile. This is based upon an average width of 35 to 40 feet. Therefore, the total roads expected to be needed as a result of the Proposed Action (133 miles existing and 95 miles proposed) would be about 1,140 acres or 1.5% of the Planning Unit.

The timber outputs for each alternative are calculated on the same basis as used in the Forest's current Timber Management Plan. The formula includes a reduction of ten percent in volume per acre to reflect openings or holes not shown by the Land Classification.

Theoretically the 1,140 acres to be occupied ultimately by roads should be shown in the nonforest/unproductive land class. While it is possible to calculate the approximate acres by site class and land class as you suggest for existing roads, it would not be possible for the proposed road miles. There is no way to accurately locate each proposed road by Land Use Alternative at this level of planning. We see no real need to make such a time consuming calculation when almost half of the data (for proposed roads) is not available.

O. "Alternative No. 1 is described in 30 pages of the DEIS. No where are objectives and measurable criteria given for determination of management success. We believe the plan and FEIS should provide measurable parameters which allow (at some date into the plan) a determination whether all or part of the plan is being implemented. For example, a rule that "soil considerations are paramount to all management activities" is meaningless without objective criteria. Better would be: A survey of soil conditions will be conducted and documented by a Soil Scientist before planning is completed for each timber sale or road construction (or campsite development) job. Sediment traps will be used upstream and downstream on the smallest flowing stream associated with each project. At the appropriate times during and after project completion, the sediment traps will be analyzed and an independent soil scientist will evaluate the project effect on soil loss and stream sedimentation. Protective measures for the soil will be included in all timber sales based on general knowledge and specific survey data. As a management goal, man's activities shall not cause soil depletion at a rate 5% above natural soil depletion based on planning unit reference measurements.

Response - One of the major objectives of long-range land use planning on the Gifford Pinchot National Forest is to provide improved criteria for guiding a quality job of land management. We believe this Environmental Statement contains a number of criteria appropriate at this level of planning for land allocation. For instance, page 36 of the Draft Statement discussed soil areas where roads and certain logging methods would be either unacceptable or limited. We have added maps of these

areas to the Appendix herein. Pages 36 and 37 mentioned areas where timber harvesting would be limited to protect other resource values. These limitations are discussed in more detail under each resource heading, i.e. soils, water, wildlife, etc. In addition, the Forest Service has many resource protection guidelines not specifically mentioned herein.

On the Gifford Pinchot National Forest the Forest Supervisor and his Staff annually review resource plans, including proposed timber sales and roads for the next five years. These plans are also made available to the public. One of the objectives of this review is to resolve resource conflicts.

The Supervisor's Office currently conducts one presale audit of individual timber harvest proposals annually on each Ranger District. These reviews are done on-the-ground on a multidiscipline team basis to be sure the proposed project is consistent with long-range plans, and provide adequate consideration and protection of all resources. In addition, one post-sale audit is conducted on each District to be sure our administration of the activity carries out the intent of the original planning. Also, one road audit is done on each District annually. This review is in more detail than the post-sale audit above, although both are done on a multidiscipline team basis. The objective of this audit is to determine if the completed subject road meets the intended needs and objectives as established by management and to determine if managements first concepts were correct and realistic. Less formal reviews occur on an on-going basis. Periodic reviews are also made by the Forest Service Regional and Washington D.C. offices.

As mentioned on page 36 of the Draft Statement, each project proposed will require an on-the-ground evaluation. This will include review by appropriate specialists such as soil scientists, wildlife biologist, etc. To define each and every specific guideline which might apply to each future project is beyond the scope of this long-range plan for land allocation. Please refer to our response to Comment F, under Input No. 24 for a discussion of water quality monitoring on the Gifford Pinchot National Forest.

P. "The acreages provided at the top of page 30 do not add to the indicated sum. Please clarify any land use overlaps so that the entire Planning Unit is considered."

Response - The figures on page 30 were in error. The correct acreages were shown on an Errata Sheet which should have been included with each copy of the Draft Statement. Please refer to our response to Comment B, under Input No. 1 concerning land use overlap.

Q. "On page 41, Noise should be recognized as an environmental impact of the proposed action. Mitigating measures to silence chains saws, tractors, etc. should be considered and proposed as part of the plan since noise is incompatible with other (recreational) uses of the area."

Response - We agree that noise is an impact and have added wording to that effect. We do not believe an individual Planning Unit is the best forum to propose specific noise reduction measures on such things as tractors and chain saws since the scope of this impact far exceeds the boundaries of any one unit.

R. "On page 47, economic data is presented regarding Planning Unit outputs. One item is "return to the Federal Treasury". We believe that the management costs of the USFS for the Planning Unit (appropriated funds) should be identified and subtracted from this sum. Do for each alternative."

Response - We have added this item. Refer to the Social and Economic Environmental Impacts for each Land Use Alternative.

S. "The water impact of Alternative No. 2 should be less than Alternative No. 1 since less roads and logging is anticipated (see page 63)."

Response - There must be some misunderstanding here. Under management direction for Water on page 63 we indicated that resource management as far as water is concerned would be substantially the same as under Alternative No. 1. However, at the bottom of page 63, under Environmental Impacts, we stated "The potential for adverse impact upon such resources as vegetation, soils, water, wildlife and air as a result of tangible commodity removal will be less under this alternative (No. 2) than any of the other alternatives."

T. "On page 64, it is stated that water and forage production would be decreased (tangible commodities) under Alternative No. 2. How can forage be reduced (more in Alternative No. 1) and water production be reduced? We believe the basic conflict is simply between timber and recreation use for this area. No economic estimate of recreation value is given. We suggest that rather than add up individual known sales, that the USFS conduct a public survey of the region (Wash., Ore., Idaho) and ask "Because of recreation value in national forest lands, how much extra pay would you demand if moved to another part of the nation where national forest lands are remote (greater than 1,000 mi.)"

Response - Our statement as written on page 64 was intended to list examples of tangible commodities. We have made it more specific by eliminating water and forage.

There are various methods for placing a dollar value on recreation. We do not believe these could reasonably be made to apply specifically to an individual Planning Unit and not be wide open to interpretation. We are not aware of any factual method for comparing recreation values on a dollar basis with those for timber harvest.

Input No. 27 - Mazamas

A. "We feel that motorized vehicles do not belong on most of the trails in this unit (present and proposed). The pumice base of a good lot of the unit does not make trails that will stand up to the digging action of a powered wheel, particularly on slopes. There are two to three times as many miles

of road in the unit, some of them quite remote, which could be used by the machine. Trails to be used by motor bikes should be constructed to a much higher standard, with a heavy gravel base and no sharp switchbacks and steep grades."

Response - Since the planning on the unit was started, Executive Order #11644 was issued. This directs all Federal land management agencies to develop an overall management plan for the use of off-road vehicle. Because this must be completed by December 31, 1976, we are considering trails and other areas of motorized use as a separate issue. The public is involved in this plan which, on this Forest, we hope to implement by June 1, 1976. The comments contained in this input will be considered in developing that plan. Unit Plans prepared thereafter, will be the vehicle to revise or modify the ORV plan.

B. "We feel there is a need for a few small roadside camps of three or four sites, with water from a creek and one outhouse. Wright Creek and Elk Creek could be possibilities. These would help fire control as the location of campers could be better controlled. Also, there is a need for a few primitive camps along the present and proposed trails. These should be a short distance off the trail with a sign directing people to them. A fire ring is about all that is required. The Lewis River Trail could use a few now, as backpacking use is increasing along this trail."

Response - At this time we are not in favor of small limited development sites along roads. This type of development costs much more per visitor to maintain than a larger development. With very limited allocations for recreation development we feel the public would be better served by the larger sites. As stated on page 34 of the Draft Statement we do not recommend any additional overnight facilities in this planning unit along roads. Trailside camps are not precluded, but their location would be based upon a more detailed on-the-ground study, such detail is beyond the scope of this plan for land allocation.

C. "House Rock - This old emergency lookout, is an excellent viewpoint, and restoring the old trail to it would provide a short trip to a good viewpoint. The trail to it could be restored down to the proposed tie trail, suggested above; this would then make a nice trip from Swift Reservoir. Again, because this is a logging area the scenic standards could include logging."

Response - We do propose a trail along the Muddy River to tie the Clear Creek and Lewis River trails together. This has been added. We do not recommend a trail to House Rock because of the safety hazard presented by the high bluff.

Input No. 28 - Eleanor Heller

A. "Since no car campgrounds are planned near or at trailheads of the Clear Creek, Lewis River, and Boundary Trails, these trails will be used mostly by backpackers who will camp along the trails. Driving distances from the metropolitan area and increasing cost of gasoline will tend to discourage one-day trips and day-hike use of these trails. Heaviest impact from trail camping will be along the first few miles of these trails, so trail camp sites must be identified. These sites should be off the main trail and away from streams to prevent destruction of the attractive trailside environment."

Response - Refer to our response to Comment B, under Input No. 27.

Input No. 30 - Charles C. Raines

A. "Your treatment of fire left me bewildered. On the one hand you depicted fire as a positive force in slash removal, etc. On the other hand you stated that every effort to eliminate fire in natural areas (scenic, etc.) would be taken. This is despite your statement that small fires remove much of the underbrush that provides much of the fuel for large catastrophic fires. In addition, you mentioned that fire was the major natural process for creating open meadows, which are valuable wildlife habitats. Apparently you feel that the only valuable open area is one that is created by timber harvesting."

Response - Except for your last sentence we believe the items you mention are factual. The point we are making is that we do not believe the desirable effects of wildfire are worth the trade off of a conflagration possibly denuding major portions of this particular planning unit. Such a trade off may be more acceptable in other planning units where resources such as water, timber, wildlife habitat, recreation attractions, etc. are less valuable or better able to withstand the consequences of a large fire.

B. "Silviculture - No mention was given to the fact that single species, even aged forests, are more susceptible to epidemics of disease and insects because they spread so fast through the same type of tree. Also, no mention of the increased use of pesticides and petroleum based fertilizers needed; nothing about encouraging more efficient use of slash by harvesters; also single species forests limit the number and variety of ecological niches for wildlife."

Response - It is true that extensive areas of pure species sometimes invite epidemics as you say. However, we have not had serious problems related to our reforestation program on this Forest and we do not expect significant impacts to occur in the future. Some of the practices we use to avoid such a situation are:

1. Most of our regeneration harvesting is planned to be from relatively small areas of from 25 to 40 acres in size.
2. These small areas typically contain a number of species through natural seeding from adjacent uncut stands.
3. Where a particular disease is known to be prevalent we favor species resistant to that agent.
4. We reforest using seed from a locally adapted source. Exotics and hybrids, which might be susceptible to insects or disease, are not used.

We do plan to use approved pesticides when necessary. We are currently laying out fertilization trial plots as a first step in developing an aerial fertilization program.

We have added wording concerning improved utilization of wood fiber under environmental impacts on air quality.

Under Wildlife on pages No. 44, 49, and 54 of the Draft Statement we discussed the effect of timber harvesting on wildlife habitat.

C. "Shark Rock Scenic Area - This gives minimal protection. Cutting timber in this area is allowed for a variety of reasons. The most ludicrous of them is to provide "scenic views". We have enough areas where timber harvesting has provided us with "scenic views". The view is usually of a clearcut across the valley. No mention is given to the associated damage to the land around a harvesting operation (of any kind) in a supposedly scenic area. The shape of the area also encourages harvesting. For the long arms of the Scenic Area provide a large amount of interface between natural areas and timber management areas, and a short distance from the center of the natural areas to the adjoining harvest areas. This makes the control of fire, disease and insects (and the inevitable timber salvage operations) all the more appealing rather than allowing a natural process to prevail. With these loopholes, wilderness designation seems the only alternative for keeping the area natural and scenic."

Response - As stated on page 37 of the Draft Statement no tree cutting for timber management purposes would be planned in the Shark Rock Scenic Area. We believe some latitude should be left to remove dangerous snags from a camping area, and for other reasons specifically benefiting the recreational and scenic resources. In the case of vistas we would envision removing from one tree to perhaps 30 trees only if desirable to provide a view of significantly scenic landscape such as a distant mountain. We have no specific plans for such tree removal at this time. In most cases any trees cut for these purposes would not be removed except possibly for firewood at a nearby camp area. In the rare case in which these few trees might be removed for commercial sale they would be removed by helicopter or other method not requiring roads or heavy equipment such as tractors, within the Scenic Area.

We also believe the option to remove trees in order to stem insect or disease attacks is needed to protect both the Scenic Area and resource values outside the Area as stated on page 37.

D. "What is an "adequate" buffer around lakes, marshes and meadows? This needs better definition."

Response - The typical buffer would be up to five chains, or 330 feet, in width. Its purpose would be to maintain the basic character of the habitat. Limited timber harvesting and other activities would be allowed if they did not significantly alter the overall vegetation, and thereby possibly damage the character of the lake, marsh or meadow.

E. "No discussion of closing any existing roads; only the option of building new ones. Road N90 could be closed at the Lewis River crossing, and 920 and 923 in the Spencer peak - Wright Meadow area."

Response - It is not clear to us just what your reasons for closure might be. Page 55 of the Draft Statement indicates that road closures would be used as needed to avoid harassment of wildlife. In addition,

a road might be abandoned after construction of it is shown to be unduly damaging to specific resource values, such as a road on an unstable area which can be replaced by another route with fewer adverse impacts. We have no specific proposals for abandoning roads at this time.

F. "Economics - Monetary figures only given for the timber industry; no figures on other uses that provide income for the local area and region."

Response - We do not have reliable dollar values for these other uses.

Input No. 31 - Gifford Pinchot Study Group

A. "We would like to see the Lewis River Trail area be given an unroaded classification."

Response - The trail area is just too small to meet the intent of an Unroaded classification. The Lewis River Trail is one of the more important trails on this Forest and the management of the trail and the surrounding resources is designed to maintain a recreation experience along the trail.

B. "We have a continuing concern for the Blue Lake Trail, No. 3. The trail is already too short and abused. We urge stronger protection for this trail. Any logging across this trail or roads and/or clearcuts next to this trail or lake is a cause for us."

Response - Refer to our response to Comment C, under Input No. 5.

Input No. 32 - Industrial Forestry Association

"Your final statement should not only speak to the environmental and economic impact of that proposed action, but it should also relate to the falldown from potential yields due to changes in land base and multiple use proration. This, also, is an environmental impact. A system of accumulative accountability should be initiated so that future Planning Units would show the contribution and falldown of allowable harvest volumes for the Forest level and the Columbia-Willamette area of each Planning Unit. Allocation of resources must be made more simple and clear to forest users."

Response - We have added this type of information. Refer to Item IX, Cumulative Effects, on page iii.

Input No. 34 - Lewis County Commissioners

A. "Mention is made many times about leaving dead topped trees and snags for owls, osprey, etc. These birds always have and always will nest and live where there is a food supply, which is in the clearcut and newly planted areas. Young regrowth is what increases the food supply for deer, elk, bear and birds, and more game and birds are available in the Clear Creek area now than there were 20 years ago."

"The elk calving areas would hardly present a problem because no major part of the unit will be logged at any time, keeping in mind that this cutting cycle on the higher elevations will probably be on a 150 to 175 year basis."

Response - Some species of wildlife are dependent upon snags and dead topped trees. Please refer to recent Forest Service policy in the Environmental Impacts on Wildlife under Alternative No. 1.

Neither the snag policy above, nor the elk calving area, is expected to reduce the programmed timber yield.

Input No. 35 - The Wilderness Society

A. "In particular, we urge that you consider wilderness recommendation for the northwest area of the Planning Unit which is contiguous to the National Margaret-Strawberry Mountain roadless area. Likewise, the northeast corner contiguous to the Shark Rock Scenic Area should receive similar consideration, as proposed in Alternative No. 2."

Response - The area contiguous to the Mt. Margaret-Strawberry Mountain Roadless Areas has been designated as Additional Identified Area No. 344. This Statement and the maps have been amended to reflect this change.

The area contiguous to the Shark Rock Scenic Area was considered for Wilderness recommendation in Alternative No. 2.

Input No. 36 - U.S. Environmental Protection Agency

A. "Information provided addressing present soil, slope and geologic inventory, impacts on the soil resource, and mitigative and preventive measures to be employed are not adequate to allow reviewer evaluation of the ultimate timber harvest and road building adverse impacts. In addition to the excellent photographs presented, information as to percent of Unit in the various Forest Land Classes which contain e.g. 1) high hazard soil with severe surface erosion potential, 2) slopes 40, 60, 70% etc., 3) low vegetative productive potential, 4) high dissected terrain, etc., should be given. Mitigative and preventative measures should be presented in a Management Prescriptions section sufficiently detailed to assist or give guidance to even the professional forester or the logging contractor. Also included in the Management Prescriptions should be detailed constraints and guidelines for SMU's."

Response - We have added several maps to the Appendix which should give the reader a better understanding of most of the items you mention. We believe a graphic display is more easily understood than a simple listing of acres. We are at a loss to see any real need to display your Items No. 1 through 4. To be meaningful at all these would have to be computed for each Land Use Alternative at what we believe would be an unreasonable expense in time and manpower.

Detailed management prescriptions as you suggest go far beyond this level of planning, that is, land allocation. Such detailed prescriptions are designed to fit specific projects on the ground. Many of these are included in standard contract wording which the Forest Service uses for road construction, timber sales and other projects. To attempt to list all of these here would take up a great deal of space and we believe they are not necessary to the land allocation process.

Response - It is not our intention to give unequal weight to geothermal development. At present we are not aware of any scientific data indicating the degree of development which might be supported by this resource on the Gifford Pinchot National Forest. We believe the public should be aware that if development takes place, lengthy steam lines above the ground and overhead power lines would have an impact on other resources, particularly visual. If geothermal development occurs in the future, we will do our best to mitigate its impact upon the other resources.

B. "The statement on page 15, concerning the Shark Rock area, "Because it is. . . the very evident works of man surrounding the area on three sides" seems to imply that this removes the area for wilderness consideration. To clarify this a statement needs to be added pointing out that this is not so. A good example of this in the Mt. Adams Wilderness, where almost every point so classified as wilderness overlooks the same very evident works of man."

Response: We agree that this one factor does not automatically remove any area from wilderness consideration. What we are trying to convey is perhaps a matter of degree, the Shark Rock area is relatively small and narrow. It is difficult to avoid seeing or overhearing man's closeby activities as one travels through the area. In the case of Mt. Adams one can easily be more insulated from these activities simply by being farther away from them.

C. "Throughout the discussion on these pages, it is constantly implied that the areas hold nothing unusual or unique. Actually, it would seem that unroaded forest lands are a unique asset and resource in southwestern Washington and northwestern Oregon, since currently no low elevation forest below about 5000 feet is protected in the Gifford Pinchot or Mt. Hood Forests."

Response - We have rewritten this part of the Environmental Statement.

D. "Land Ownership and Status; pages 32-33; I object to the Forest Service reversing its position on the removal of the power withdrawal, without at least a mention somewhere in the statement about the possibility of studying the Lewis and Muddy Rivers for inclusion in the National Wild and Scenic River System. The idea that a two hundred foot dam, with limited power generation capacity, will contribute significantly to long term energy policy does not seem realistic; but since the proposal for hydro withdrawal is being kept alive I would favor including the specifics of the project-how much power generated, projected and current demands-so that the public can better understand the type of tradeoff between free-flowing rivers and power generation (and profit) the Forest Service is recommending **retaining**."

Response - The Muddy Project, No. 2112 has been dropped. The Federal Power Commission revoked the application for this project. The reasons for our not recommending against power withdrawals were given on the pages you cite.

E. "When is proposed trail construction to begin?"

Response - Refer to our response to Comment A, under Input No. 12.

F. "Timber, Page 37 - The statement "....in a dispersed recreation area it may be desirable to remove enough trees to provide a scenic view" seems to ignore the fact that many people find trees highly scenic. Furthermore,

B. "One of the questions which often confronts the reviewer of a Forest Service DEIS is the disposition or impact of a harvest plan on long existing trails within the Unit. Often the trails either become logging road routes or are severely chopped up by clear cuts, and, except for deer and elk hunters for which this effect is ideally suited, the trails no longer afford the recreation value enjoyed by generations of backpackers. To many families using the "Unit" area for recreation, the greatest concern is not the disposition of the timber resource, for they recognize the harvest need, but rather the destruction of a trail. Trails are a significant part of our American heritage, passing thru the centuries from game trails to the routes of Indians, trappers, explorers, and prospectors. For the romanticist and our youth, eager for adventure, trails born of bygone times possess a value irreplaceable by the newer, better and modernized trails."

"We recommend that the Forest Service consider a system whereby Federal, State, and conservation group representatives involved in recreation planning, be given voice in the Forest Service decisions as to the disposition of existing trails. The Federal Bureau of Outdoor Recreation, State Parks and Recreation Commission, the Sierra Club, et al, should be involved in decisions addressing the future of our recreational trails systems on Federal lands. Forest Service decisions spelling the destruction of trails should stand the scrutiny and cross-examination of non-Forest Service agencies responsible for the protection of existing recreation facilities. At present no avenues exist whereby the public can voice their concern over the demise of trails. Although this would not afford the public direct input, it would afford an avenue through which the public's views could be presented on one specific aspect of a "Unit's" ultimate use."

Response - We do not believe your comments are based on fact. There are no known trails in the Unit that have special value as part of our American heritage. The proposed action will eliminate no trails that are currently being maintained. An additional 40 to 50 miles of new trail is proposed for future construction.

The public and other agencies have been afforded numerous opportunities to contribute to trail planning and maintenance. In addition to the two public meetings to discuss the planning unit alternatives, public meetings were held on May 1, 6, 7, 15, and 20, 1975, at White Salmon, Randle, Woodland, Carson, and Vancouver, Washington to discuss trail management and use plans for the entire forest.

Input No. 37 - Craig Weaver

A. "Page 10 - The statement that geothermal development could have "profound effect upon any Land Use Alternative" seems to imply that the slight prospect of geothermal development would not have an equal weight in land use plans, but possibly be weighted much more heavily than some other use, such as wildlife or dispersed recreation. Is this the policy that the Gifford Pinchot is developing or considering developing?"

while the statement that every attempt will be made to involve the public sounds fine in theory, how can the public be sure that no additional "Miners Creek deals" will not take place?"

Response - Trees are scenic as you say, none would be removed to provide a scenic view unless we felt strongly that the view to be gained would be significantly more desirable than leaving the trees in place. Please refer to our response to Comment C, under Input No. 30.

Since each specific happening on-the-ground is unique in itself and large numbers of people may be interested, there is no way to guarantee that every member of the public will be informed of every activity. We fully intend to publicize any plans to cut and/or remove trees from any area where timber harvesting is not programmed.

In areas such as Shark Rock Scenic Area, non-selected roadless areas and areas to be managed in an unroaded status with no planned timber harvesting it would be desirable to use the environmental statement process. In many cases this would mean a serious delay in controlling insect or disease attacks. In these cases we would prepare an Environmental Analysis Report. We would immediately notify the public through the news media and by mailings to those on our mailing lists who might have an interest in the project. The EAR would be reviewed and either approved or disapproved by the appropriate Forest Service official responsible for the area in question. Since the Regional Forester must approve the plans for the Shark Rock Scenic Area, he would review any such EAR for that area. The Forest Supervisor would review EAR's pertaining to those areas to be managed in an unroaded status.

G. "Favorable Environmental Impact, Fire; page 45; On page 12, the following statement is made, "Records indicate that the number of fires has increased somewhat over the last five years, as the area has been made more accessible to people through road construction". On page 45, and repeated by referral on pages 71, 80, and 94, the following statement is made: "Fewer fires should occur than under Alternative 2 since fewer people would be expected to use the Planning Unit. However, examining the amount of roads to be constructed would appear to be the criteria you are using to relate fire incidence to public use. Since according to the summary, Table 5, approximately 100 miles of road are to be constructed under Alternative 1, 3, 4, and 5, as compared with only 50 miles of road under Alternative 2, the conclusion stated on page 45, in regard to the criteria on page 12 is wrong."

Response - Other factors being relatively constant we believe that numbers of people, and therefore fire occurrences, tend to increase with additional miles of road. One of the objectives of Alternative No. 2 is to provide a significantly higher number of potential recreation visitor days use than provided by the other alternatives. While the number of road miles is less than in the other alternatives there would be increased emphasis on the use of developed sites such as campgrounds and picnic areas.

H. "Where is data available on the environmental impact of herbicide spraying projects? How is the public informed when such an operation is authorized and is stream contamination a serious problem (page 52)?"

Response - For a discussion on how the public is informed of herbicide spraying projects refer to our response to Comment B, under Input No. 16.

Water monitoring data on selected streams is available at the office of the Forest Supervisor.

Stream contamination from spraying on this Forest is not a serious problem. There is no record of a significant impact since we began monitoring herbicide spraying in 1969. Some of our guidelines used to insure minimum impacts are:

1. No spraying within one hundred feet of any live stream.
2. No spraying when wind is over 6 m.p.h., humidity is under 50%, temperature is over 75° F., there is a temperature inversion, or rain is impending.
3. Use of an additive to reduce the fine water drops to avoid wind drift.

I. "Page 64 - If the Shark Rock area were to be designated as a part of the Wilderness System, then arbitrary decisions regarding any commodity production must be made by Congress. The option of committing such lands to commodity production probably does not really exist. (Comment - This entire document repeatedly fails to recognize the recreational use of land as an end use of the land, but instead repeatedly tries to emphasize that the option of full commodity production for the land is always available in the future, pages 43, 64, 74, 83, 94, and Table 6 pg. 101. It is precisely this attitude that forces citizens to seek statutory wilderness protection for wildlands in the National Forests, and illustrates why wilderness study is needed and necessary for the upper part of Clear Creek roadless area 308, above the junction of Clear and Elk Creeks, in addition to the following areas: Shark Rock, #309, Langille-McCoy Creek, #309, Upper Lewis, #310, and Juniper Peak, #311. Furthermore, the Upper Green Roadless Area needs to be added to the Mt. Margaret study area. The heavy, and repeated emphasis on commodity production, coupled with an apparent strong desire to turn all growing trees into wood products puts a heavy bias all across this document."

Response - It is not our intention to indicate all undeveloped land would be used for timber purposes in the future. We do, however, believe our statement is factual. You are correct in stating that Congress would have to approve such action on an established wilderness area, but even there the option does exist. We believe it is important that the public understand this.

J. "Page 66 - The fire statement does not appear to be consistent with the initial statement made on page 12. Which is the greater danger for starting fires - more roads and better access or fewer roads and possibly more people. This question is not answered to my satisfaction."

Response - You make a good point here, the increased number of potential fires would be the result of increased use outside the wilderness areas. We have changed the wording herein. Please refer to our response to your Comment G above.

K. "Table No. 6, page 101 - How can land classified as wilderness under the Wilderness Act properly be referred to as "an area on which option of commodity production is reserved" (under the heading of Social and Economic, Alternate 2)?"

Response - Refer to our response to your Comment I above.

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT

PHYSICS 311

LECTURE 1

MECHANICS

1.1 Kinematics

1.2 Dynamics

1.3 Energy

1.4 Momentum

APPENDIX

FOREST SERVICE REGION SIX FISH
HABITAT MANAGEMENT POLICY

Fish Habitat Protection and Restoration

- GOAL: Prevent deterioration of in-stream and riparian physical conditions which provide for food production, cover, and reproduction of fish and other aquatic organisms.
- GOAL: Meet State and Federal water quality standards.
- GOAL: Improve, where practical, in-stream and riparian physical conditions which affect habitat of fish and other aquatic organisms.

Timber Harvest and Road Construction

- GOAL: Prevent massive soil failures associated with timber harvest and roads which adversely affect water quality and fish habitat.
- GOAL: Eliminate deficiencies in road construction, maintenance and timber harvest which, in aggregate, constitute unacceptable damage to water quality and the aquatic habitat.
- GOAL: Where practical, improve physical conditions which, as a result of timber harvest or road construction, have affected fish and other aquatic organisms adversely.

FOREST SERVICE REGION SIX DEAD TREE
(SNAG) MANAGEMENT POLICY

A. Minimum Goal

As a minimum, provide habitat to maintain self-sustaining populations of snag-dependent wildlife species on a National Forest basis.

B. Minimum Objective

On a continuing basis, by the year 2000 (Renewable Resources Planning Act target), provide dead, standing, and down trees as needed to meet the above goal, on at least a majority of commercial forest acres of each National Forest. It is recognized that many areas will take additional time to produce the desired size dead trees.

C. Minimum Criteria to Accomplish Objective

The minimum needs for dead trees will vary among habitats and species. Until each forest has described its more specific habitat needs, the following criteria will be used to provide at least a minimum continuous supply of dead trees suitable for wildlife.

1. Areas West of the Cascade Summit:

- a. Manage for a minimum of two standing dead trees per acre 15" DBH, 15' tall minimum size within five chains of water and/or openings larger than one acre.
- b. Manage for an average minimum of one standing dead tree per acre 15" DBH and 15' tall minimum size on the remainder of forested lands.
- c. Manage for a minimum of two down-dead trees per acre, 40 cubic feet minimum size.

D. Special Coordination Requirements

To coordinate the above objectives with other resource management goals, the following are examples of situations which will receive special consideration:

1. Snags and other trees representing a recognized safety hazard on or adjacent to Forest roads, logging operations, recreation areas, or structural improvements.
2. Designated fuelbreaks and firebreaks and other strategic locations identified in pre-attack fire planning.
3. A recently dead tree that contains in excess of 800 board feet lumber, net scale.
4. Opportunities to develop artificial nesting and perching habitat.

5. Opportunities to girdle unmerchantable defective trees, to high-stump some merchantable trees where natural snags are scarce, to select spike top trees to extend the life of a snag tree, to girdle trees in the middle crown to extend snag life, etc.

E. Definitions

1. Dead Tree: A nonliving tree with a majority of the exterior surface visibly sound or not in rotted condition. The interior of these trees may or may not be rotted, a condition which is difficult to assess readily. Those with rotted interiors are considered "soft snags", those with solid interiors "hard snags". Hard snags, over time, may become soft snags. Dead trees with less than one-half the exterior surface visibly sound are useful to cavity-dependent species; however, their usefulness is short-lived.
2. Forest Opening: A natural area where the predominant vegetative cover is neither deciduous nor coniferous trees. A clear cut is not considered an opening under this definition.
3. Self-sustaining Population: A species population of sufficient size to be capable of natural self-perpetuation.
4. Water: Areas east of the Cascade summit = all permanent ponds, lakes, and streams; plus intermittent streams that normally run water at least during the period March - June. Areas west of the Cascade summit = perennial streams of 3 cfs or more plus all ponds or lakes more than 1/10 surface acres.

F. Dead Tree Distribution

It is not intended that the prescribed number of dead leave trees per acre be applied to each acre; however, neither is it the intent that dead trees in large concentrations be averaged with large areas void of dead trees to meet the minimum prescribed number per acre. This policy is written considering primarily the inter-specific relationships and minimum self-sustaining levels. More snags will increase population of these species. Dead trees should be well distributed for wildlife. Some species have relatively large territories, as the screech owl (30 acres). Therefore, if 640 snags on one section of land are concentrated on 30 acres, there will still only be one nesting pair of screech owls present.

G. Forest Policy

Each Forest shall develop on an inter-disciplinary basis a Forest manual supplement within the framework of this Regional policy which will provide for more specific dead tree habitat requirements for animals known to exist on the Forest. In other words, forest guides should be prescription oriented rather than general in nature.

Wildlife species in Region 6 that are totally or heavily dependent on dead and defective trees:

SPECIES

SPECIES (cont.)

BIRDS

Red-breasted nuthatch
White-breasted nuthatch
Pygmy nuthatch
Black-backed 3-toed woodpecker
Northern 3-toed woodpecker
White-headed woodpecker
Hairy woodpecker
Downy woodpecker
Williamson's sapsucker
Yellow-bellied sapsucker
Pileated woodpecker
Acorn woodpecker
Lewos' woodpecker
Common flicker
Wood duck
Common goldeneye duck
Barrow's goldeneye duck
Bufflehead duck
Harlequin duck
Hooded merganser
Spotted owl
Saw-whet owl
Screech owl
Pygmy owl
Flammulated owl
Sparrow hawk
Bald eagle
Golden eagle

BIRDS

American osprey
Peregrin falcon
Pigeon hawk
Red-tailed hawk
Rough-legged hawk
Swainson's hawk
Ferruginous hawk
Tree swallow
Purple martin
Western bluebird
Mountain bluebird
Ash-throated flycatcher
Black-capped chickadee
Mountain chickadee
Chestnut-backed chickadee

MAMMALS

California bat
Little brown bat
Big brown bat
Marten
Fisher
Bushy-tailed woodrat
Chickaree
Red squirrel
Western gray squirrel
Northern flying squirrel
Red tree mouse

FOREST SERVICE REGION SIX STREAMSIDE MANAGEMENT UNITS

Stream Class - The present and foreseeable uses made of the water, and the potential effects of on-site changes on downstream uses, are the criteria for defining four stream classes. The importance of use will be relative to the general area. Consequently, size is not necessarily a criterion for classification. Whole streams or parts of streams can be classified. One stream may be sectionalized into several classes.

Class I - Perennial or intermittent streams or segments thereof that have one or more of the following characteristics:

Direct source of water for domestic use (cities, recreation sites, etc.).

Used by large numbers of fish for spawning, rearing, or migration.

Flow enough water to have a major influence on water quality of a Class I stream.

Class II - Perennial or intermittent streams or segments thereof that have one or both of the following characteristics:

Used by moderate though significant numbers of fish for spawning, rearing, or migration.

Flow enough water to have only a moderate and not clearly identifiable influence on downstream quality of a Class I stream, or have a major influence on a Class II stream.

Class III - All other perennial streams or segments thereof not meeting higher class criteria.

Class IV - All other intermittent streams or segments thereof not meeting higher class criteria.

Management Goals - Management activities within the SMU will be designed to meet goals established for each class of stream. The broad management goal for all streams is to meet water quality standards, and to protect the stream and its adjacent environment so as to maintain fish, and other aquatic resources at high natural levels. Specific management goals, as itemized below, recognize that some water quality changes may inevitably occur for certain classes of streams in order to obtain the best overall yield and mix of the many land and water resources. Resource planning shall be aimed at minimizing such changes, in accordance with Forest Service environmental protection responsibilities.

Class I - The use of the water, and downstream influence of this class of stream, justify the highest level of protection and enhancement. Management activities will not degrade water quality, fish or aquatic resources below the existing or natural level, except for temporary changes resulting from:

Activities designed to improve the stream; e.g., restoration and habitat improvement.

Necessary transportation system crossing; e.g., bridges, culverts.

Structures associated with putting the water to beneficial uses; e.g., irrigation diversions, domestic supply intakes.

Temporary changes are those which are transitory in nature; i.e., the effect ceases and water quality returns to its previous level when the permitted activity ceases. In any event, changes as a result of these activities must be minimal and adequately monitored.

Class II - The use of the water and downstream influence of these streams justify a high level of protection and enhancement. Management activities will not deteriorate water quality below State and Federal water quality standards, except for temporary changes as provided for in the standards, resulting from essential short-term activities.

Temporary changes include those defined for Class I streams but shall not include:

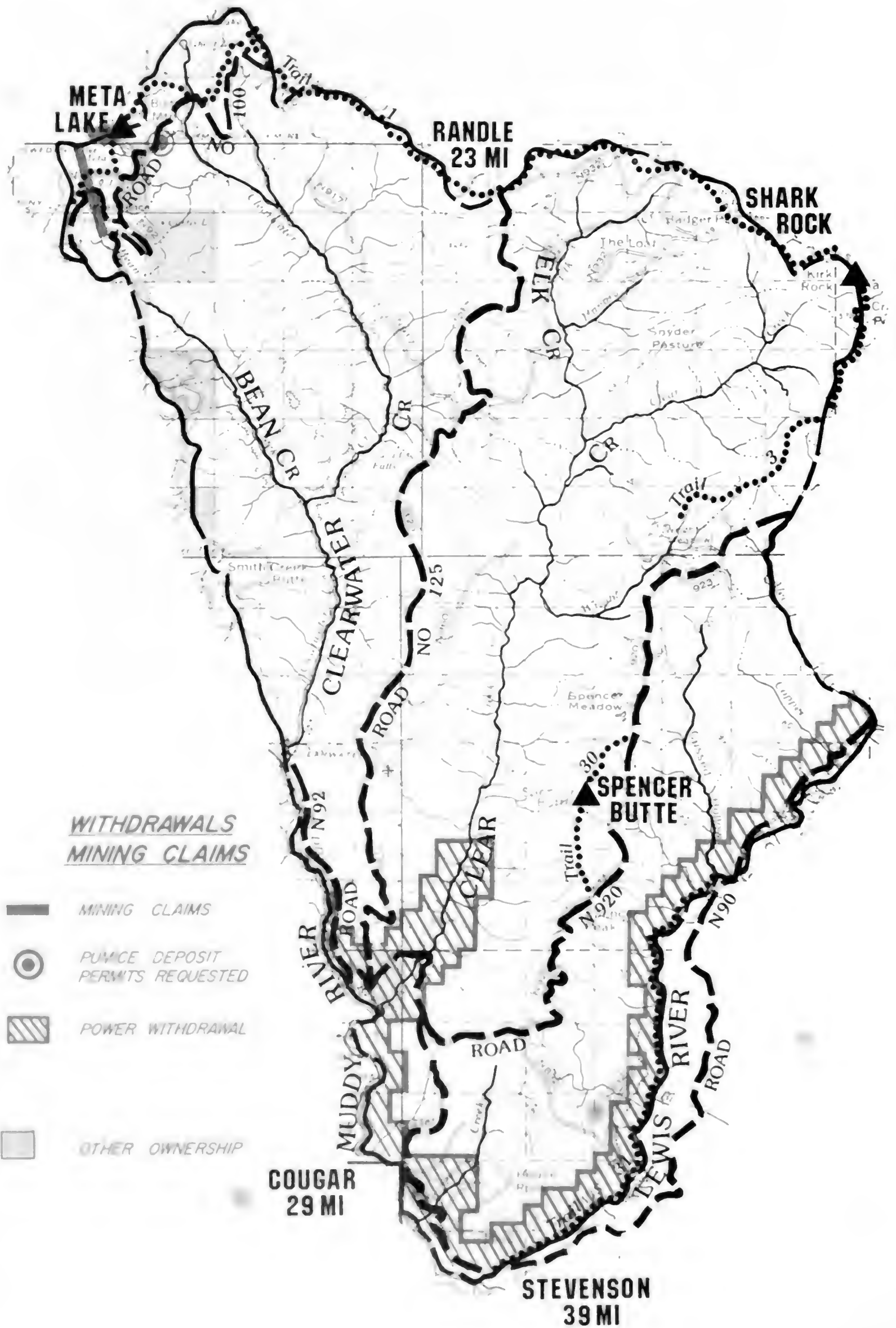
Increased water temperatures which take a minimum of several years for shade re-establishment, or

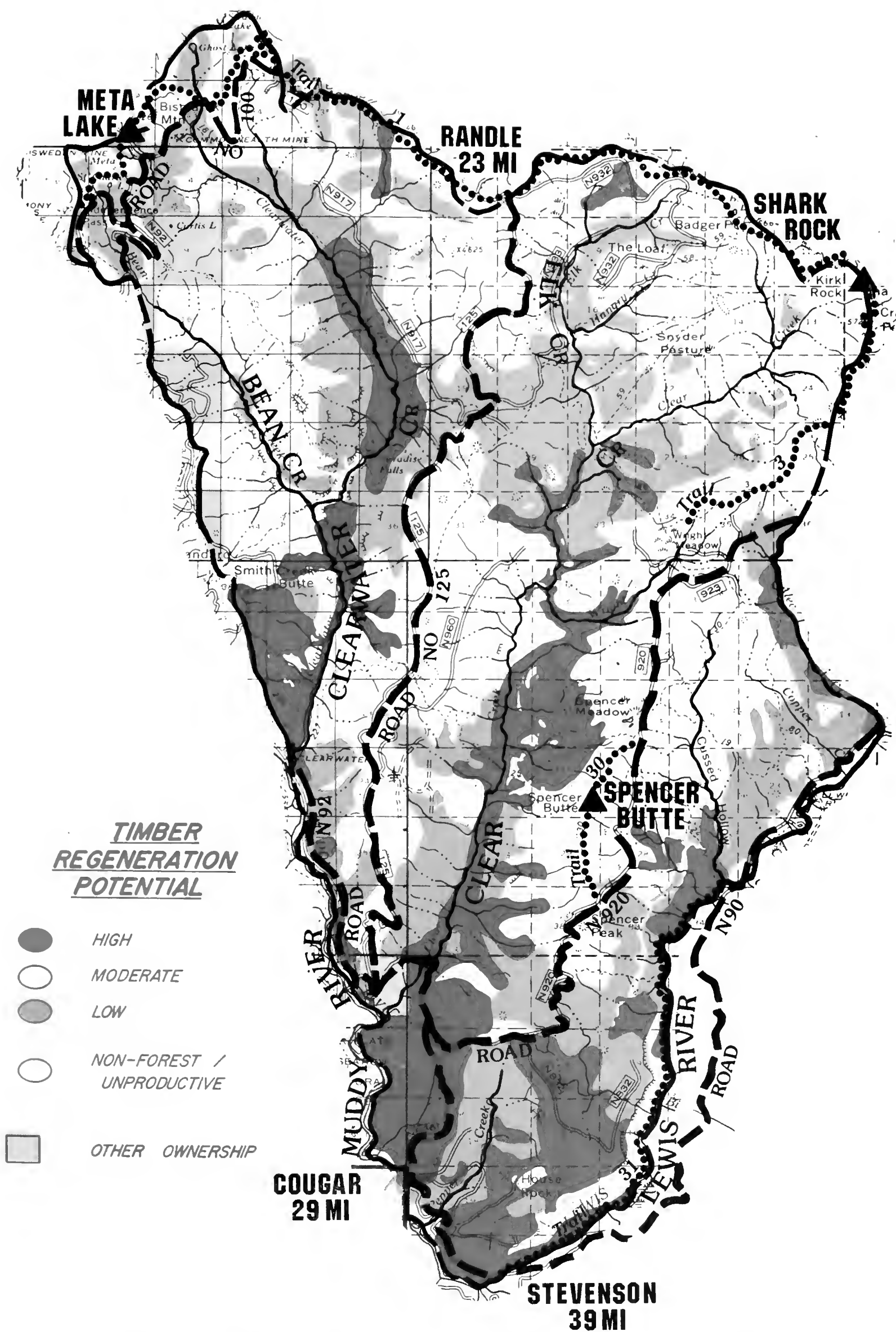
Turbidity from long-term disturbances such as roads or large denuded areas that act as a recurring source of sediment for a period of time until stabilization is achieved.

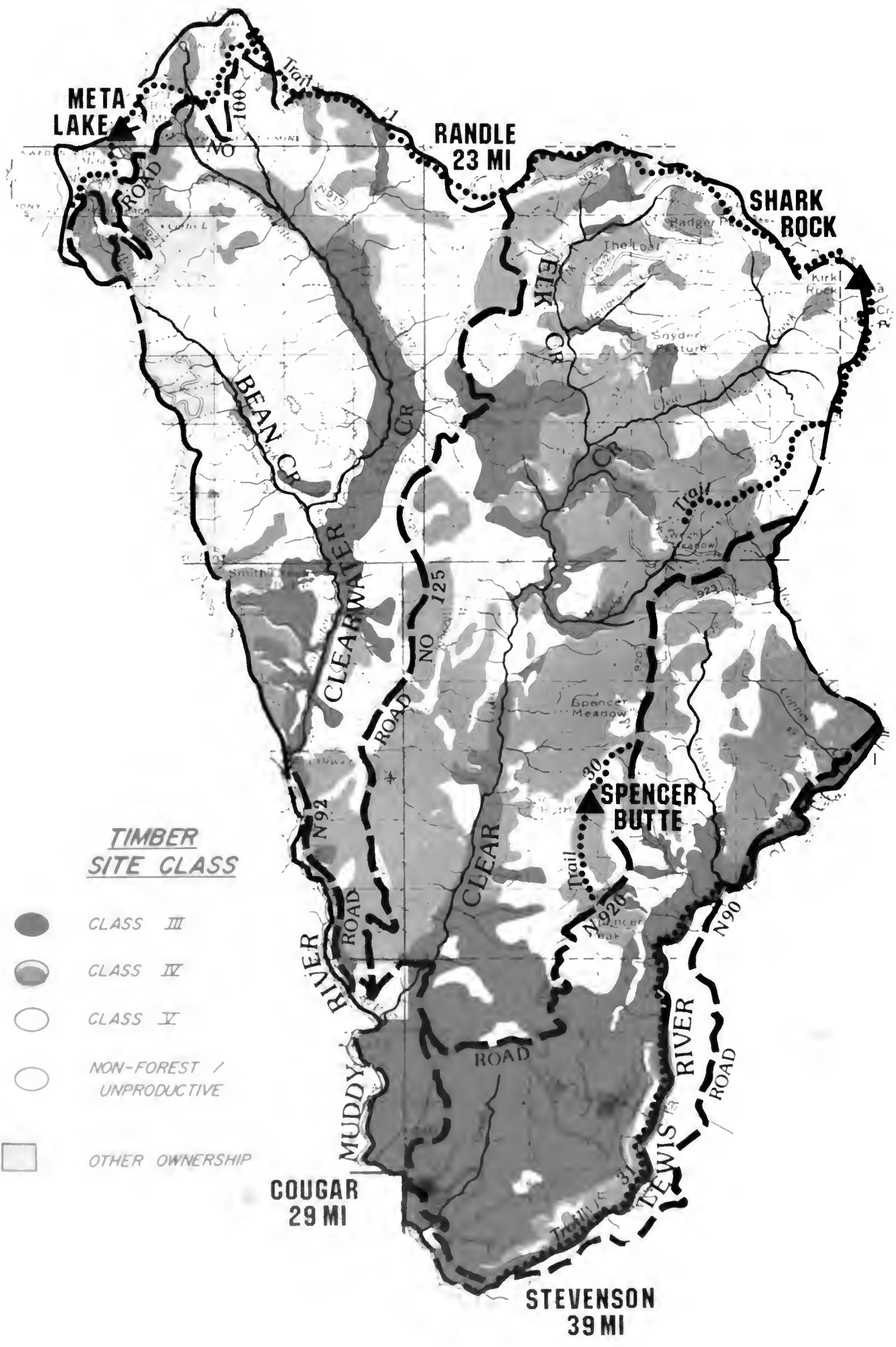
Class III - The minor on-site use and downstream influence of such streams justifies a normal level of protection. Management activities will not deteriorate water quality below existing State and Federal water quality standards except for changes resulting from short-term activities as provided for in the standards.

Class IV - The minor on-site use and downstream influence justifies a normal level of protection. Management activities will not deteriorate water quality below existing State and Federal water quality standards except for changes resulting from short-term activities as provided for in the standards.

Changes in Class III and IV streams may involve some temperature and turbidity increases, provided these do not cause Class I or II waters to fall below standards. Temperature effects will usually diminish when shade is re-established, and turbidity when erosion control measures become effective.

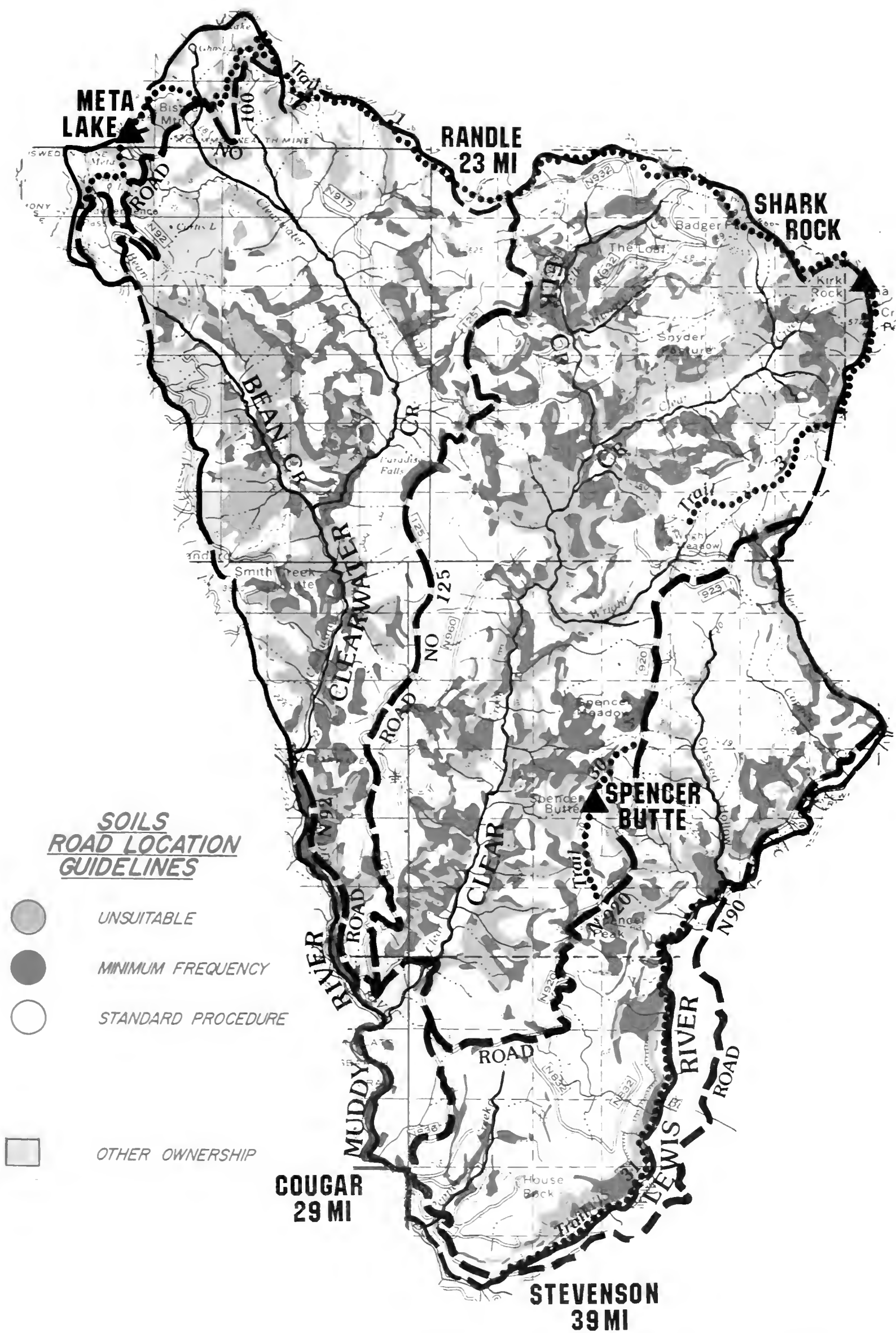


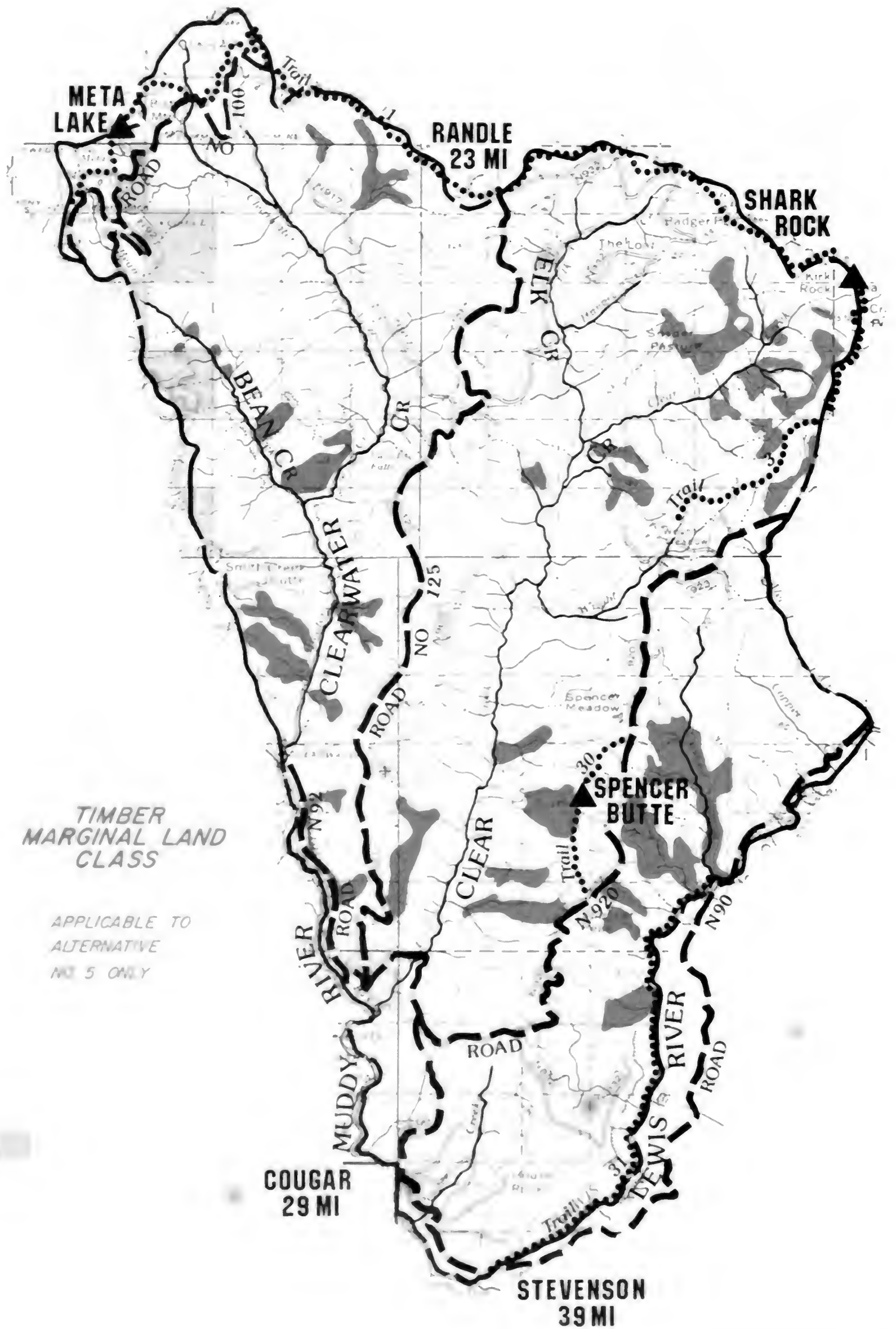


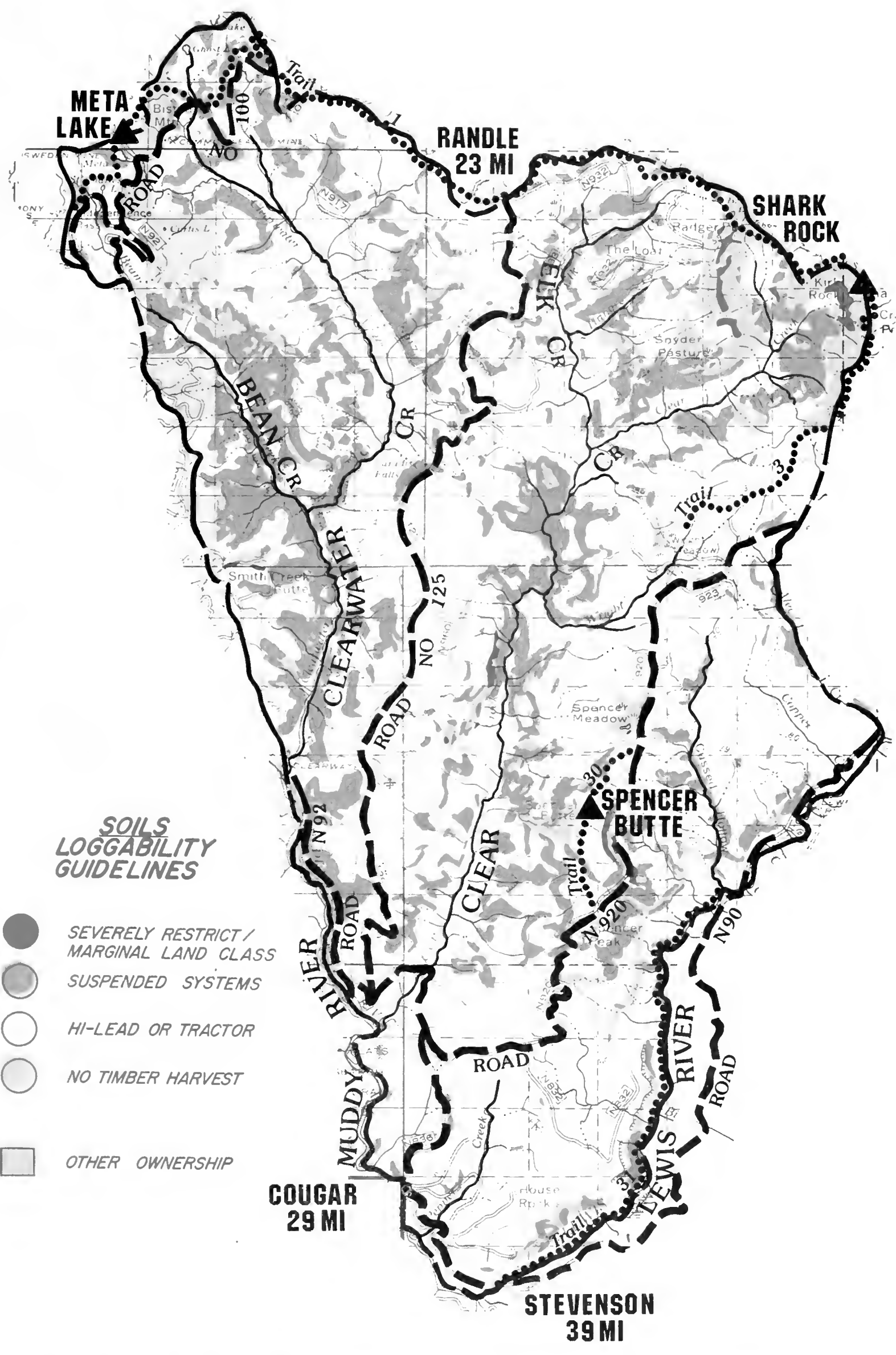


TIMBER
SITE CLASS


- CLASS III
- ◐ CLASS IV
- CLASS V
- NON-FOREST / UNPRODUCTIVE
- OTHER OWNERSHIP



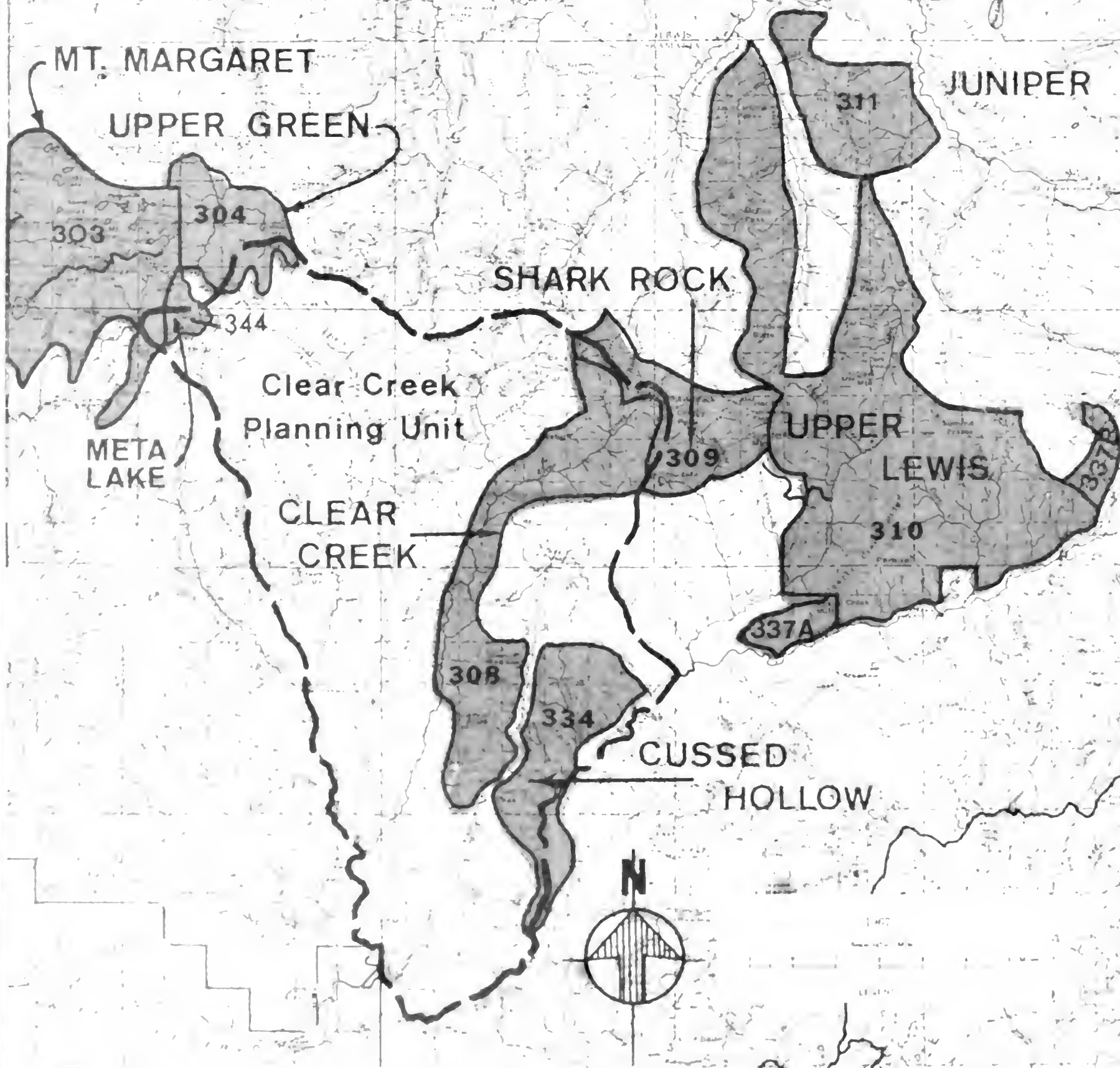


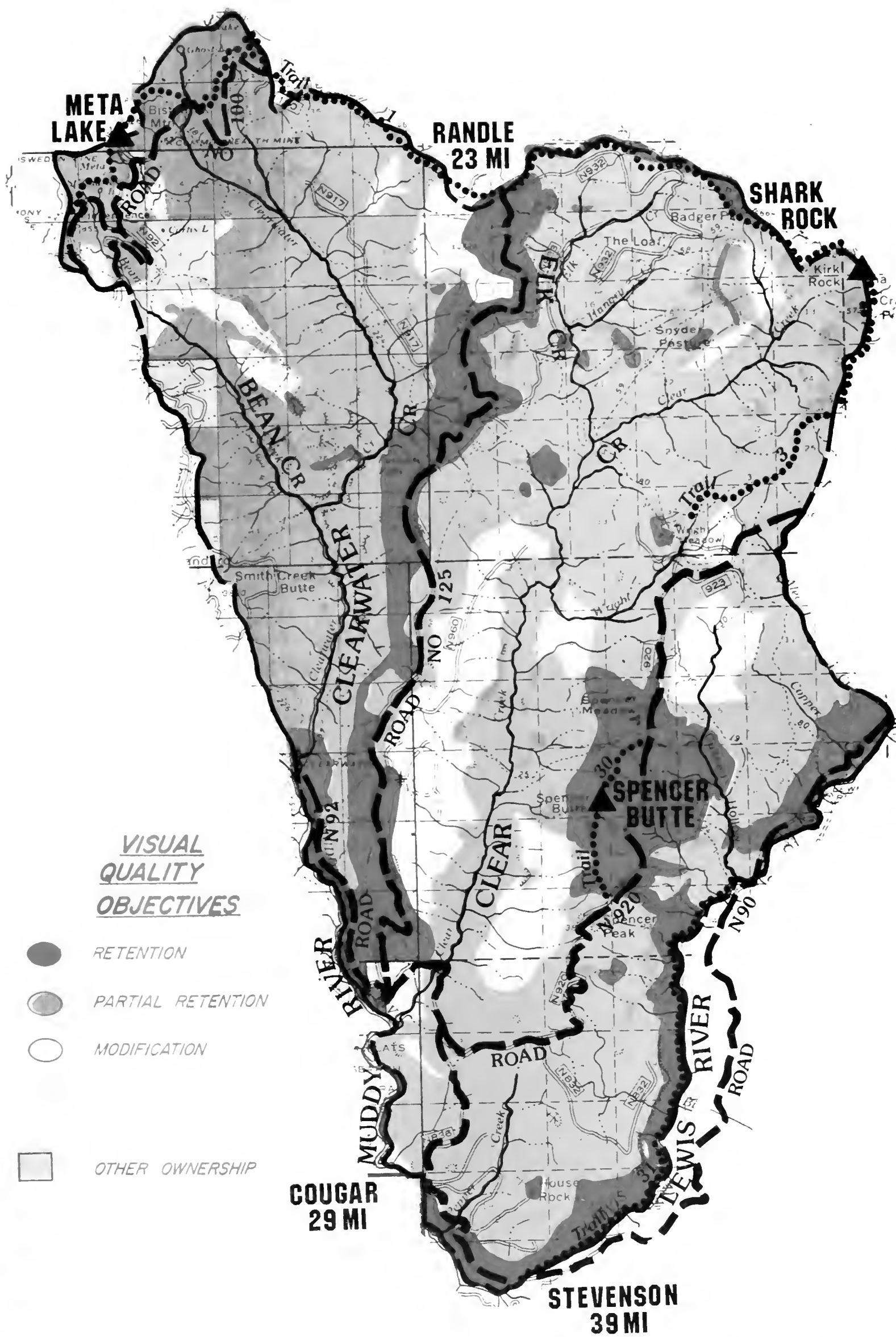


**SOILS
LOGGABILITY
GUIDELINES**

-  SEVERELY RESTRICT / MARGINAL LAND CLASS
-  SUSPENDED SYSTEMS
-  HI-LEAD OR TRACTOR
-  NO TIMBER HARVEST
-  OTHER OWNERSHIP

INVENTORIED ROADLESS and UNDEVELOPED AREAS





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Principal Laws Relating to the Management of the Planning Unit:

1. "Creative Act of 1891", (16 U.S.C. 471)
2. "Organic Administration Act of 1897", (16 U.S.C. 473 (note)).
3. "Transfer Act of 1905" (16 U.S.C. 472 (note)).
4. "Renaming Reserves Act of 1907" (34 Stat. 1269).
5. "Weeks Law", (16 U.S.C. 480 (note)), 1911.
6. "Clarke-McNary Act", (16 U.S.C. 471 (note)), 1924.
7. "Multiple Use-Sustained Yield Act", (16 U.S.C. 528 (note)), 1960.
8. "Wilderness Act", (16 U.S.C. 1131 (note)), 1964.
9. "National Historic Preservation Act", (80 Stat. 915), 1966.
10. "Endangered Species Act" (16 U.S.C. 668 (note))., 1966.
11. "Wild and Scenic Rivers Act", (16 U.S.C. 1271 (note)), 1968 amended 1975.
12. "National Environmental Policy Act of 1969", (42 U.S.C. 4321 (note)).
13. "Geothermal Steam Act of 1970", (84 Stat. 1566-1574).
14. "Federal Water Pollution Control Act of 1972", (33 U.S.C. 1151).

Other Resource Data* Available on the Planning Unit:

1. Maps: topographic, planimetric and resource data
2. Oblique aerial photos
3. Slide catalogue
4. Area calculations
5. R-6 Environmental "Stuff" Book
6. "Land Resource Evaluation System", Gifford Pinchot National Forest

*This data is located at the Supervisor's Office of the Gifford Pinchot National Forest and is available to the public for review there.



Comments on: DRAFT ENVIRONMENTAL STATEMENT
IMPACT ANALYSIS - CLEAR CREEK PLANNING UNIT
Gifford Pinchot National Forest

February 19, 1975

"The proposed management plan provides for almost every resource use, except wilderness and domestic range." Plan I fails to recognize that wilderness in unroaded areas is a use. It represents the habitat of the animal world that man has not usurped. However, wilderness should not be managed for recreation or other benefits to man outside the natural ecosystem. Let the use be restricted to wild animals and wild plants that require an unmanaged world for survival. The Cascades contains the last possibility.

Because wilderness is an essential, Alternate 2 is the only acceptable plan of the future for the Clear Creek Unit. The roadless areas would remain roadless. No dead trees would be removed that are so valuable to the natural ecosystem of wild animals and birds. Alternate 2 will not remove the Upper Green from roadless and wilderness consideration. Shark Rock will not be disturbed; man, the aggressor, will be a visitor only as a participant in the natural processes.

P. 46 comments that dead and dying tree material "would go and does go to waste". This is not consistent with the amount of waste left to burn as slash by logging operators. Soil in mountains is only the accumulation of this dead and dying material converted through natural processes of decomposition and mixing with minerals in rock by percolation of moisture. The duif reveals moisture over long periods while there is drought in cutover lands. Cutover lands may receive deeper snowfall, but they are the first to be bare in summer. There is no rapid runoff in an old forest, therefore the moisture is retained longer under the insulation cover. P. 48 does not include under vegetation the low ground cover plants and endangered flowers that lose their habitat after logging and slash burning.

P. 60 In Alternatives 2, the Management Area would include 200 acres rather than the 30 acres in Alternate 1 for camping purposes and dispersed recreation. Thirty acres of high development along Road 100 is certainly enough and perhaps too much close to the wilderness.

P. 60-Critical soils. Why should there be only 15.0 in Alternate 2 but 2490 Acres in Alternate 1? Given the same action plan, with proper road construction exacted in all plans, there should be little difference.

P. 62-Roads and trails. 45 miles of new road for timber harvest is better than 90, but why extend them to campgrounds? If the amount of critical soil increases with the miles of road constructed, then carefully worked trails would lessen the impact on the soil of man's presence. Trails would be less costly to build than roads, and make less impact upon wildlife. Dispersed recreation can be located away from properly screened logging roads in any water supplied area. Protection of streams doubles the usefulness of a managed forest.

P. 67-Soils. All logging roads should be built to FFA standards therefore the roads in all plans should have the same quality and kept to the minimum mileage possible.

P. 68-Water. Overnight camping should not be permitted close to lakes or streams. Proper management will determine suitable sites. The cost is the people's share of the revenue from timber loss.

5529 27 Avenue N.E. 98105
Seattle, Washington
February 19, 1975

Spencer T. Moore, Forest Supervisor
Gifford Pinchot National Forest
Vancouver, Washington

Dear sir:

Since we are native Washingtonians for seventy years, we would like to comment on the Clear Creek Planning Unit impact analysis. We are not concerned with economic aspects of the plans because we feel that MAN has taken his share from the area already. We note that the number of job opportunities varies very little from one plan to the other. Thank you for the opportunity to review the draft statement.

Sincerely,

Ellis Ogilvie
Ellis Ogilvie

Ellis & Faye Ogilvie

On page 16 you describe the Shark Rock Scenic Area as "a ridgeline area at about 5,000 feet in elevation." I have no doubt that this area should be wilderness. Its high elevation is a sample of the "W. Wilderness on the Rocks" the proposal you present for the Clear Creek Unit.

Another concern of mine is the proliferation of roads in this unit and the rest of the Forest at the expense of trails, while road mileage have been growing by leaps and bounds trail mileage has steadily shrunk. The increased road mileage has also made access easier to fragile alpine areas and resulted in overuse problems. The problem will continue to grow as you build roads into the remaining roadless drainages.

Finally on Page 107 ~~where~~ you show the number of inputs favoring and disfavoring the four Alternatives from your last request for public input. It shows that a majority, by far favored Alternative No. 2 which recommended ~~the~~ wilderness classification for most of the roadless areas in this Unit. Yet in your final proposal you have completely disregarded these inputs and not propose any wilderness study areas at all. Why do you seek our inputs if you don't use them?

Sorry if my letter ~~seems~~ strong but it seems that nearly every trap I take into our Cascade, I see another beautiful mountain stripped of its trees and opened to erosion, roads where my favorite trailways used to be. The last time I climbed Mt. Helens the views of the south, east and west ~~showed~~ showed how little wilderness is left in the southern Cascades and I fear you're going to develop that which remains. The vast majority of the S. & F. Pinchot is already devoted to full resource production (money) while beauty, clean air, clean water and wilderness recreation are pushed to the back ground.

After reading nearly all your brochure I have the following specific comments regarding your proposal and information for your present proposal you have 6,390 acres for roadless recreation yet have already said that nearly $\frac{1}{3}$ of it is to have timber harvest his eliminates any confidence I may have had in supporting the establishment of roadless areas instead of wilderness.

On page 14 you give the wilderness quality for each of the four roadless areas. You noted that only Shark Rock had a high quality rating, but who determined this rating system in the first place? Was it someone who had real knowledge and a "feel" for wilderness? I'll bet it's someone who made this quality index had very little information to determine their suitability for wilderness. Even so, should a medium or low quality rating permanently remove these roadless areas from even a study for wilderness? This is surely what will happen if you continue to log and road all but the few areas you have determined to have high wilderness quality. Little or nothing will be left for them in the future. You are removing any chance in the future.

I can say that Clear Cr. roadless area is too narrow for wilderness. Even if this is true, which I doubt why can't all the roadless areas be considered for a roadless classification without logging. It certainly offers an excellent water oriented area for back-country trophy experiences. Sadly the water of Clear Cr. will never taste as good when one is aware clear-cut logging and roads spoil so much of its drainage.

As for the Curved Hollow-Pendleton area you state that it has many of the desirable wilderness qualities but nothing is either outstanding or unique. My answer is so what? Do we now have to be outstanding or unique to be even studied for wilderness? Wilderness due to its scarcity in the country is unique within itself. I find your statements here lack objectivity and are based on a personal belief that an area has to have something unique to be considered for wilderness.



Bob and Ira Spring • photographers

MR IRA L SPRING
ROBERT W SPRING

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COMMENTS BY IRA SPRING ON THE DRAFT ENVIRONMENTAL STATEMENT FOR THE CLEAR CREEK PLANNING UNIT

I strongly criticize the Draft Environmental Statement for the Clear Creek Planning Unit. In no way does this statement relate to the topography and problems of the whole Gifford Pinchot National Forest. Furthermore, it is very obvious this statement was prepared by a biased industry-oriented team.

The impact statement lumps together all trail uses. Hikers, horse riders, and motorcycles are all under one category. The statement does not even mention the conflict between the various uses. To be of any value in considering trails, the various uses must be separately listed with various alternatives to relieving the conflict.

Virtually nothing is said about the growth rate of trees ^{and} various elevations (the only reference is related to soils and how tall the trees grow). As much of the proposed timber cutting is at an elevation of over 3,000 feet and in an area of heavy snowfall, tree growth is a problem. A statement is needed on how long it will take for a tree to reach a merchantable size.

The impact statement says little about the pros and cons of wilderness areas or the need in relation to the surrounding population. It does not point out that the Shark Rock roadless area is the focal point of six contiguous roadless areas, three of which are outside this study area. Although the one large roadless area was divided into six parts, it can only be studied as one unit.

Alternate Number 11 is the only alternative that proposes any significant wilderness area, and in this case there is so much proposed, it would be unacceptable to most people. An impartial planning team would have given two or three alternate wilderness proposals and shown the pros and cons of various sized wilderness areas.

Two natural arches are located within the Clear Creek Unit. I know of only four arches in the whole state, which makes these two arches unique enough to have been mentioned in the impact statement.

Page 4

Please don't write me off as some radical Sierra Clubber. I don't belong to that organization or any similar one though I often agree with their views. I have a Degree in Forestry and have worked for the Forest Service for several years. I'm also a thinning contractor for the Forest Service.

My views are changing as my values are changing. No longer do I stress for money ~~and~~ beyond what my immediate ~~good~~ needs are. The need for beauty and peace of mind of which wilderness helps provide are becoming my goals. The I hope and feel will also be one of future Americans do not leave a portion of the Gifford Pinchot in its natural condition for them; and let it be more than just a few mountain tops.

All of the roadless areas in the Clear Creek Unit should be studied for wilderness. That is the only way to find out what the best use is. Thank you.

Sincerely,

Michael L. Callen

Michael L. Callen

5850 Princeton Ave. NE

Seattle, Wash 98105

C. C. Raymond Foster, Congressman Joel Pritchard and Don Bonker



Pacific Northwest Chapter of the SIERRA CLUB

P.O. Box 819, Ashland, Oregon 97520

March 4, 1975

Mr. Spencer T. Moore
Gifford Pinchot National Forest
Vancouver, Washington 98660

Re: Draft EIS, Clear Creek Planning Unit

Dear Mr. Moore:

We have studied the draft EIS for the Clear Creek Planning Unit. We would like to submit the following comments and recommendations:

PLANNING UNIT DESCRIPTION

This draft EIS supplies very little detailed information about the planning unit. Such information is necessary for the public to judge the appropriateness of the Forest Service land-use proposals. Gross figures are given about site class and regeneration potential (p. 25), areas unsuitable for road construction and conventional logging systems (p. 36), marginal areas (p. 37), 7000 "highly scenic" acres (p. 25), 9000 acres of winter range (p. 27), and others. The draft EIS does not tell the public where these areas are located on the planning unit. This type of information should be supplied by use of appropriate maps, similar to those the Forest Service has supplied in informational brochures for other planning units. Indispensable to a complete EIS are maps showing the following information:

1. Regeneration potential
2. Marginal component of the timber base
3. Areas to avoid or restrict road construction
4. Areas to avoid or restrict timber harvest
5. Areas for suspended logging systems only
6. Streams with a resident trout population, if this is known.
7. Timber site class (not current stand)

THE PROPOSED ACTION

A. Lewis River. This is uncontestedly a very beautiful river. It should be treated as a candidate for classification as a National Scenic River from the forest boundary to the Mt. Adams Wilderness. In the Clear Creek Planning Unit there should be no logging in the Lewis River bottom. This flat bottomland is near river level and is most striking along the lower 5 miles of Trail 31. Much of this bottomland is part of the Gussied Hollow Roadless Area, and we emphatically disagree with the incorrect statement (p. 15) that "nothing is either outstanding or unique in this area". The Lewis River bottomland is, in fact, an outstanding area for big game winter range and for roadless recreation, unique on the Gifford Pinchot National Forest, with a high capacity for this type of use. There should be no roadbuilding or logging on this bottomland.

"not blind opposition to progress, but opposition to blind progress"

We support Forest Service plans for relocation of the Lewis River Trail upstream, but we also recommend that the trail be extended downstream from the present trailhead to a junction with the proposed Clear Creek Trail and thence along the Muddy to a trailhead on Road 125. Study of the topographic maps indicates that there is sufficient space to locate a trail between the river and existing roads and clearcuts.

B. The Muddy Project. This proposed P&L power impoundment below the confluence of the Muddy would result in significant losses of productive timberland, wildlife habitat, part of the Cedar Flats Natural Area, and scarce recreational opportunities, that is, of resources which come under the direct charge and responsibility of the Forest Service. There would also be considerable loss of investments in existing road and trail systems. On the other hand, the Forest Service stewardship does not include any responsibility regarding development of hydroelectric power. There are already three large power reservoirs on the Lewis River, more than enough to supply the demand for this type of recreation in the area. In view of the Forest Service responsibilities for timber, wildlife, and recreation, it would be totally inappropriate for the Forest Service to recommend against removal of the power withdrawal. If any letter is written to the Federal Power Commission, it should detail in quantitative terms the losses of timber, wildlife habitat, miles of free-flowing rivers, and forest recreation opportunities (hiking, riding, camping, rafting, stream fishing) which would result from the Muddy Project.

C. Shark Rock Scenic Area. We support the Forest Service proposal to include the upper basins of Clear Creek in the Scenic Area. However, we believe the Scenic Area boundary should be located about two miles farther down the Clear Creek valley to include the steepest valley slopes, which we consider unsuitable for roads and logging. In addition, all of the unproductive areas adjacent to the proposed Scenic Area should be included in it. The management criteria for this Special Interest Area should be the same as those given in Management Direction for the Oregon Cascades. It should be pointed out that the flat upper basins of Clear Creek lie at about 4000 ft. elevation, and are virtually surrounded by steep ridges and peaks rising 1000 to 1800 ft. above the basins. This provides conditions of almost perfect wilderness solitude. The Sierra Club recommends eventual wilderness classification for the Shark Rock area and contiguous de facto wilderness areas to the east and north.

D. Clear Creek Unroaded Area. This corridor along Clear Creek will serve several uses if kept roadless. Foremost is protection of the fragile and in places unstable soils. It will, at the same time, protect the valuable Clear Creek fish habitat from degradation, although unwise roading and logging up-slope from the corridor could still cause fish habitat damage. Above the confluence of Elk Creek, the steep slopes would increase the likelihood of such damage, and we recommend no roads in the Clear Creek valley above this point. In the stretch just below Elk Creek, we question whether the proposed roadless corridor is wide enough, in view of the unstable soils prevailing here. Other important uses of the roadless corridor are roadless recreation and undisturbed winter range for big game. We endorse the Forest Service proposal to keep the roadless corridor free of motor vehicles.

Since the land characteristics and resource values which exclude roads and regulated timber harvest as uses in the Clear Creek corridor are essential-

ally permanent factors, we believe it would be appropriate for the forest Service to make a long-term commitment of this area as the Clear Creek Special Interest Area. Alternatively, the Policy given on the top of page 5 of the new Fish Habitat Management Policy should be applied: "In areas where soil conditions are judged to be so sensitive that roads cannot be constructed or that timber cannot be harvested by any logging system without degrading water quality below state standards or causing unacceptable fish habitat damage, the timber will be left standing and the area classified as unproductive, permanently inoperable, forest land."

E. Area North of Road 100. We endorse the Forest Service proposal to keep this area roadless and to prohibit motorized use on the Boundary Trail in this area (p. 35). We recommend, however, that the Forest Service exclude all motorized use from the area. This will prevent damage to the land and wildlife habitat by cross-country vehicles from Road 100 and will help to keep a quiet atmosphere at Mota and Ghost Lakes. Because continued maintenance of Road 100 aggravates the extremely serious erosion and traveling conditions caused by the original road construction, we strongly urge that this unfortunate road be closed permanently.

F. Boundary Trail. While the existing plan (Alt. #5) gives landscape management protection to Trail No. 1, the proposed action shows (p. 116) retention standard only east of Elk Pass. The section between Elk Pass and Bear Meadow has only a partial retention standard, in common with the bulk of the planning unit. This is not acceptable treatment for this important trail route. The entire Boundary Trail deserves the best possible visual quality protection. Our feeling is that if Road 125 deserves retention standard, the Boundary Trail certainly does as well. Even more so, in fact, since travelers on this trail are more likely to be in search of a natural esthetic experience than are travelers on Road 125. What is needed is a management direction that gives the trail special consideration throughout. Thus, portions of the trail that now have a natural foreground should be left alone; portions where the foreground has been modified by roads or logging should be restored as much as possible to a natural appearance.

G. Trail No. 3. This trail between Wright Meadow and the Boundary Trail is shown on the map of Alternative #1 (p. 29). It lies for the most part in the proposed Shark Rock Special Interest Area, but about one mile of the trail lies between the latter and the Wright Meadow Wildlife Habitat Area. We urge that this section of trail be kept open and that the Final EIS have a statement to this effect.

H. Clearwater Creek Trail. This is an excellent proposal which we strongly endorse. It would form a valuable trail link between the Lewis River area and the Spirit Lake - Green River country. If possible, this trail should be located to take full advantage of the ruggedly scenic Paradise Falls area.

I. Timber Yield from Special Areas. In the case of special areas (visual, wildlife, water) the statement is made (pp. 37, 39, 46) that "less than full timber yield" will be obtained. The Forest Service has given precise figures for potential yield (34.1 MSBF) and actual programmed harvest (28.5 MSBF). Thus the Forest Service has precise figures for the percentage of full yield used for each of the special areas. These figures should be given, at least as a range of values, for each of the special classifications. This could also be given in terms of the proposed rotation ages (The figure of 175 years is given in the current plan on pp. 90-91).

ADVERSE ENVIRONMENTAL EFFECTS WHICH CANNOT BE AVOIDED

A. A grave inadequacy of this draft EIS is the failure to discuss the unavoidable loss of scenic beauty and roadless recreation opportunities under the Adverse Environmental Impacts of the Proposed Action. We consider both to be serious adverse impacts.

B. We agree with the statement on page 52 that the effects of soil and nutrient losses due to logging and slash disposal are unknown. However, we disagree with the confident statement that these losses can be offset. There is no evidence that all soil losses, e.g., nitrogen, phosphate, potassium, manganese, magnesium, trace elements, etc., can be repaired artificially. If the Forest Service has such evidence, the references should be cited. It is precisely questions of this sort that throw doubt on Forest Service projections of repeated crops of high quality timber from the often shallow and infertile soils of the National Forests.

We appreciate the opportunity to comment on this draft EIS.

Sincerely,

Diane Meyer

Diane Meyer, Chairman

cc: Gifford Pinchot Study Group

Doug Scott

Walt Mintkeski

EPA

Mr. Spencer T. Moore
12 March 1975
Page 2

3. Your recommended alternative number one appears to be a reasonable recognition and allocation of the multiple uses of the areas as well as adequate recognition of the social and economic values involved. We generally support this alternative but offer comments 1 and 2 for your consideration.

I appreciate this opportunity to comment and would like also to review the final environmental impact statement.

Very truly yours,

11. 11. 11

Steele Barnett
Forest Counsel

SB:hs

4000 4th Avenue, North
Great Falls, Montana
50401

Spencer T. Moore
Forest Supervisor
Gifford Pinchot National Forest
500 W. 12th St.
Vancouver, Washington 98660

March 11, 1975

Dear Mr. Moore:

I have reviewed the draft environmental statement for the Clear Creek planning unit and would like to offer the following questions and comments for your consideration in preparing an improved final statement.

A major concern of mine relates to the existence of inventoried roadless areas in and adjacent to the planning unit. Specifically, I am concerned about the apparent lack of established criteria used to determine the boundaries of the roadless areas. If two or more roadless areas are contiguous, with no developed corridor separating them from each other, why have they been inventoried as separate roadless areas? Is separation of roadless areas for reasons other than previously developed lands justified by the enabling legislation? For example, what justification exists to allow a roadless resource to be divided due to differences in topography, geomorphology, or ecological land units? If such separations are specifically permitted, I would appreciate your confirming the source as I have not been able to discover such authority within the roadless inventory, the National Environmental Policy Act or anywhere else. If it is not specifically permitted, how do you justify the fragmentation of one roadless area to "create" two smaller areas, Upper Green and Mt. Wapinitz? Or, the fragmentation of one roadless area into three smaller areas, Clear Creek, Mount Rock, and Upper Lewis? In view of the importance placed on stream acreage (size) by the Forest Service roadless inventory and quality index of roadless areas, it is critical to their objective study that each roadless area be retained in a unified state and at its optimum acreage. Without this, in study of the present resource can be considered valid. Further, the apparent fragmentation of the roadless resource leads this reviewer to question the integrity of the decisions which resulted in some 274 roadless areas being "selected" as New Wilderness study areas while more than 1000 others were officially abandoned.

As stated, and emphasized, in the draft environmental statement, the definition of "multiple use" as used in the Multiple Use Sustained Yield Act includes, "the harmonious and coordinated management of the various resources, each with the other, without impairment of the productivity of the land". This definition refers to renewable resources specifically and, therefore, includes timber management. My concern is that although timber management is

the same time rejecting their weaknesses. This alternative, then, would differ significantly from both 1 & 2. Some of the changes needed in the proposal to achieve this alternative follow.

1) Timber: Roaded timbering techniques would be restricted to those areas already accessible by roads and not otherwise limited by soil constraints. Logging within roadless areas would be by roadless methods only, and must also be consistent with other potential environmental constraints. The impact of further roadless is long term and substantially reduces the availability of the road to future changes in management policy.

Clearcutting as a timber harvest method would be permitted only where ecological alternatives do not exist. In most instances the decision to clearcut severely restricts future management decisions until the regrowth reaches maturity.

2) Transportation routes: An additional roadless would occur except in areas already roaded. All non-roaded roads would be physically closed and rehabilitated when not needed for management policy.

All inventoried roadless areas would retain their present roadless character with extractive development, if permitted, restricted to non-roaded methods. Roads are not necessary in forest management, though they do make areas more subjectively accessible. This restriction will give future managers additional flexibility to meet more variable future needs.

All trails will be closed to motorized travel unless otherwise indicated.

3) Cattle: All soils possessing high or very high ratings in either soil movement or mass movement potential will be avoided for all extractive or developmental activities to ensure protection of the watershed and retention of forest productivity.

All slopes in excess of 40% and available for logging would be restricted to the use of aerial systems.

4) Roadless Areas: All roadless areas would be re-inventoried and studied specifically for their value as wilderness before they are made available for any consumptive use. Currently completed studies are inaccurate in terms of boundaries and size, are subjective in terms of rating systems, and are currency in terms of date of study. This type of study is not adequate for the purpose of making long term decisions as to potential land uses for these areas.

Whether or not a roadless area, after further study, is considered for formal wilderness designation, all roadless areas would be held as a roadless resource so that future managers may be given greater flexibility in their management decisions.

Areas that, after further study, are not proposed for formal wilderness designation may be used for the full range of forest uses except, roaded access. Timber harvest and other extractive uses could be permitted by aerial methods.

alternately,

Thomas E. Nichols

Thomas E. Nichols

stated to be covered by this definition, in actual practice timber continues to be managed with singular importance. The Forest Service designation of productive forest land is a case in point. Presently, any land capable of producing at least 20 cubic feet per acre per year is classed as productive. Since allowable harvest calculations are dependent upon the acreage of productive forest land this acreage essentially forms the base for commercial timber calculations as well. It must then be assumed that the Forest Service considers the 20 cubic feet measurement to represent the minimum production level at which commercial harvests can be maintained.

The problem is that the only resource value being considered is the growth potential of the timber site. Other resource value considerations have to represent value in those calculations. It appears, then, that timber values are not being related to other resource values as required by the Multiple Use-Sustained Yield Act but, rather, are being considered as almost entirely more important than the numerous other values also present at the site. When the productivity of timber is compared to the relative productivity of other, usually important resources, it almost certainly doubt that many sites capable of producing less than approximately 50 cubic feet per acre per year would continue to qualify as "productive forest land". I urge that this singular evaluation of timber resources be eliminated and that the true multiple use concept be allowed to determine resource allocations.

Of further concern to me is the treatment given the soils resource in the proposed management plan (alternative 1). According to the data given, it seems that only marginal logging techniques would be required on 33,540 acres rather than 13,050 acres as indicated on page 36. Also, a map showing the locations of potentially hazardous soils and areas of potential mass movement in relation to the proposed management would be a most helpful addition to the environmental statement. The addition of such a map would also serve to lend some credibility to statement #6 on page 28, a statement generally ignored by the planners of this unit.

I can not endorse any of the five proposed alternatives as none of them are aimed at creating a realistic balance of land uses. It seems that each alternative must overemphasize one or more potential uses to the point of utter domination far beyond its proportionate value. It is my belief that alternatives 3, 4, & 5 do not meet the criteria established by the Land Use Planning Act, are ecologically unsound, and therefore not worthy of further consideration. This belief is borne out by public comment to the alternative selection phase for this unit. Alternatives 1 and 2 then represent the "extreme" acceptable viewpoints; both are possible management forms but neither is likely to be acceptable to a wide range of viewpoints. Alternative 1 assumes timber values to be primary while alternative 2 represents recreation as the primary value. In each case all conflicts are resolved in favor of the assumed primary value and that action is in direct conflict with the Multiple Use-Sustained Yield Act which states that multiple lands will be managed for the combination of uses that best meets the needs of the public. In my opinion the true multiple use alternative lies between alternatives 1 & 2 and takes advantage of the soundest arguments in favor of these alternatives while at



BURLINGTON NORTHERN

Mr. Spencer T. Moore
March 14, 1975
Page -2-

Mr. Spencer T. Moore
Forest Supervisor
Gifford Pinchot National Forest
P. O. Box 449
Vancouver, Washington 98660

March 14, 1975

Mr. Spencer T. Moore
Forest Supervisor
Gifford Pinchot National Forest
P. O. Box 449
Vancouver, Washington 98660

RE: Clear Creek Draft Environmental Statement

Dear Mr. Moore:

Thank you for the opportunity to comment on this Clear Creek DEIS. We found it to be a thorough and objective analysis of the environmental, social and economic consequences of the proposed management for this unit. The sections relating to economic and social factors which result from the proposed plan versus alternative plans are excellent and we commend the Forest Service for the improvement they have shown in this important area.

We believe the DEIS could be enhanced by the addition of small scale Forest maps which (1) illustrate the relationship of the Clear Creek Planning Unit to the other 15 planning units mentioned on page 9 and (2) illustrate the location of existing wilderness or proposed wilderness study areas on the Forest or any other existing or proposed classified areas. This later map would provide perspective to the reviewer regarding the scope and nature of lands being set aside for special uses and avoid the implication that the designation of special use areas has not been fully considered.

Pages 32, 43 and 47 discuss Forest Service plans to acquire Burlington Northern's lands through exchange. We are surprised you failed to discuss this proposal with us prior to issuing this public document. We feel the proposal oversimplifies the feasibility of land exchange occurring. Even though we both recognize the desirability of land exchange, there are many problems associated with this proposal. The most significant are as follows:

1. The timber cutting rights to BN's land in this unit are under contract to International Paper Company. If exchange occurs, it would require their involvement.
2. The lands are within an identified geothermal belt of presently undeterminable value.

3. Present land exchange procedures are cumbersome, time consuming, costly and filled with uncertainty, factors which tend to mitigate benefits accruing from improved management opportunities.

We believe these factors should be brought out in the final statement.

On page 34 it is proposed that a 110-acre roadless area on BN land be kept around Curtis Lake. The statement is unrealistic as roads nearly surround the Lake and come to within 300 feet from the shoreline. Logging already exists approximately one-quarter mile from the Lake and more will undoubtedly occur since the timber is under contract to IF. No land exchange involving this parcel is deemed feasible in the near future due to its potential geo-thermal value and contractual obligations. This proposed set-aside should be deleted from the plan.

On page 44, Wildlife, the third paragraph discusses the decline in the number of snags and dead-top trees. This statement is incomplete without reference to specific wildlife needs.

On page 50 the first paragraph should explain there is no evidence that wood smoke is harmful to public health in the volumes generated by these controlled slash fires.

Also on page 50, under alternatives to broadcast burning, please add "improve utilization to decrease the amount of residue left in the forest."

Sincerely,

Michael R. Truax
Manager, Land Planning

MRT/mjb

cc: Mr. Dave Bote - International Paper Co.

tion. Gravitational energy released by the accretion process, a possible mechanism, requires that the HAP was at least of lunar size. Urey has commented on the existence of such bodies in the early solar system (15). The short-lived ^{26}Al radioisotope is another possible heat source. Its detection in primitive objects of the solar system is the subject of renewed interest (16).

C. J. ALLÈGRE
J. L. BURCK
S. FOURCADE
M. P. SEMEL
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17. Our interest in meteorites is the result of the enthusiasm, encouragement of Dr. P. Pellas in this country. We are indebted to G. Uhl and M. Girard for maintaining the mass spectrometer in good working order. Institut de Physique du Globe contribution number IFG NS 115.
18. February 1974; revised 2 October 1974.

Mount St. Helens Volcano: Recent and Future Behavior

Abstract. Mount St. Helens volcano in southern Washington has erupted many times during the last 4000 years, usually after brief dormant periods. This behavior pattern suggests that the volcano, last active in 1857, will erupt again—perhaps within the next few decades. Potential volcanic hazards of several kinds should be considered in planning for land use near the volcano.

Mount St. Helens, a prominent but relatively little known volcano in southern Washington (Fig. 1), has been more active and more violent during the last few thousand years than any other volcano in the conterminous United States. Although dormant since 1857, St. Helens will erupt again, perhaps before the end of this century. Future eruptions like those of the recent past would affect a broad area beyond the volcano, but the area most likely to be severely affected is not yet heavily populated.

The high probability, based on past behavior, that Mount St. Helens will erupt again indicates that potential volcanic hazards should be considered in planning for future uses of the land that could be affected by an eruption. The potential risk from future eruptions may be low in relation to the lifetime of a person or to the life expectancy of a specific building or other structure. But when dwelling places and other land uses are established, they tend to persist for centuries or even millennia. Major changes in long-established land-use patterns, which become necessary to protect lives or property, can then

Our purpose in this report is to summarize a remarkable and generally unrecognized record of recent activity at Mount St. Helens and to compare it with the history of some other well-known volcanoes. We also assess the significance of the present dormant interval, which has lasted nearly 120 years. The data now available suggest that since about 2500 B.C. the volcano has never been dormant for more than about five centuries at a time and that dormant periods of one or two centuries, or less, have been more typical. Even apparently dormant intervals may have been broken by eruptions that did not leave a conspicuous deposit. The eruptions noted in our chronology include only those which produced deposits large enough to be preserved and recognized today. As many or more eruptions may have oc-

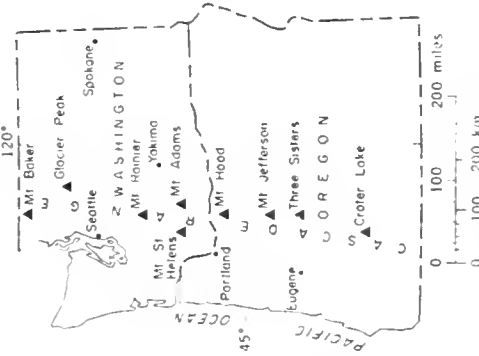


Fig. 1. Index map of Washington and Oregon showing location of Mount St. Helens and other volcanoes.

3-10-75

MR MOORE -

ATTACHED ARE 2 RECENT CLIPS WHICH SHOULD BE OF INTEREST TO YOU IN CONNECTION WITH CLEAR CREEK P.N. AND G.P. TIMBER MANAGEMENT PLAN. PLEASE CONSIDER THIS NOTE AS A COMMENT ON BOTH DOCUMENTS SUGGESTING CONSIDERATION OF THESE REFERENCES IN IMPLEMENTING LAND USE PLANNING AND TIMBER MANAGEMENT.

SINGLESEET

JOHN L. FARMING

732 SE REED COLLEGE PL
PORTLAND, OR 97202

ATTACHMENTS:

- 1) Economic Impact of Energy Shortages on the Logging and Sawmills, Paper and Allied Products Industries, Volume 2, Delex Systems, Inc., Springfield, Va. May 74, 246p TR-D-171-Vol-2, FEA/EI-1653-Vol-2 PB-236 263/0WE PC\$7.50/MF\$2.25
This study is one of a series conducted in an effort to provide meaningful information on the structure and characteristics of a selected lumber industries. Particular emphasis is placed on fuel use by major type and production process. In addition, the possibilities for fuel substitution and conservation of energy are explored. Report covers logging, sawmills, millwork, and plywood industries.
- 2) "ST HELENS VOLCANO: RECENT & FUTURE BEHAVIOR" SCIENCE, 7 FEB 75 by CRANDALL & MULLINEAUX

Structure and characteristics of the pulp, paper, paperboard, corrugated and solid fiber box, and building paper and building board industries are discussed, with emphasis on fuel use by major type and production process.

carried for which stratigraphic evidence either does not exist or has not yet been recognized. We see clear stratigraphic evidence, for example, of only one of the dozen or so 19th-century eruptions that were reported by explorers and settlers after Lewis and Clark's pioneer expedition of 1806 (5).

Since about 400 B.C., Mount St. Helens has shown considerable diversity both in its behavior and in the chemical composition of its eruptive products. Eruptions of basaltic and andesitic lava flows and tephra have been interspersed with eruptions of dacitic domes, tephra, and pyroclastic flows (6). Mount St. Helens has had a complex recent history, and the lithologic diversity of the resulting deposits makes it possible to recognize more volcanic events than if the eruptive products had all been of a single rock type.

Eruptive chronology. The known eruptions of about the last 4000 years can be roughly grouped into four periods: 2500 to 1600 B.C., 1200 to 800 B.C., 400 B.C. to A.D. 400, and A.D. 1300 through the first half of the 19th century (Fig. 3).

From 2500 to 1600 B.C., following a dormant period that may have lasted as long as 4000 years, Mount St. Helens repeatedly erupted large volumes of tephra, and successive domes were formed at the eruptive center. Shattering of the domes, perhaps by volcanic explosions, produced pyroclastic flows that moved beyond the volcano. Pumiceous tephras that were erupted at various times were carried downwind and some covered large lobate areas; at least one of these reached into northeast Oregon and another into western Alberta (2). A quiet interval of perhaps as much as 400 years may have occurred during this eruptive period.

In about 1200 B.C., after an interval of no more than a few centuries, the volcano began to erupt domes and pyroclastic flows, but with smaller volumes of tephra. During this period, which lasted four or five centuries, many large hot pyroclastic flows of nonvesicular rock debris, pumice, or both, moved away from the volcano in nearly every direction. Some of the rock debris became mixed with water and formed lahars (volcanic mudflows) that streamed many tens of kilometers down river valleys. Radiocarbon dates from charcoal in volcanic deposits sug-

gest that eruptions occurred sporadically throughout this period.

The eruptions of 400 B.C. to A.D. 400 produced both basaltic and andesitic lava flows, which were lacking in the earlier products of the volcano. However, the intermittent explosive eruptions of more siliceous tephra, which had characterized the volcano's earlier history, continued and alternated with the eruptions of the more basic lava flows. Thus, the new behavior pattern was characterized by eruptions of several different types and of different kinds of rock in quick succession, perhaps even simultaneously from different vents. Eruptions of the volcano formed andesitic or dacitic tephra at least twice, basaltic tephra six times, dacitic or andesitic pyroclastic flows no less than three times, and lava flows at least twice. During this period the volcano initially produced lava flows, as well as tephra; then a series of pyroclastic flows was formed starting about 300 B.C.

Although a brief episode of explosive volcanism occurred about A.D. 840, the next major period of frequent and diverse activity evidently began between A.D. 1200 and 1300. From that time on, Mount St. Helens erupted basaltic or andesitic lava flows, dacitic domes, pyroclastic flows, and tephra. The largest tephra eruption of this period occurred about A.D. 1500 and spread pumice at least as far as northeastern

Washington. The dacitic dome that forms the present summit of the volcano also was extruded during this period, probably between A.D. 1600 and 1700. The period of activity that roughly coincided with the first half of the 19th century produced tephra, a dacitic dome, and perhaps a few lava flows.

Frequency, duration, and volume. The frequency of eruptive activity can be inferred from the record and dates of known volcanism, but little is known about the duration of individual eruptions. Many eruptions, even relatively violent and voluminous ones, could have occurred within periods of a few days or months; other eruptions probably consisted of a series of small events spread over many decades. Volcanism at Mount St. Helens probably has included many brief but violent eruptive episodes like the catastrophic "Plinian" eruption of Vesuvius in A.D. 79, the eruption of Mount Lamington in Papua (New Guinea) in 1951 and 1952, or the violent outbursts at Santa Maria Volcano, Guatemala, that started in 1922 and still intermittently continue.

Figure 4 is a comparison of the volcanic activity at Mount St. Helens, Vesuvius, Fuji, and Hekla. The historic record at Vesuvius includes at least 10 and possibly 14 eruptions in the 1060 years following the one in A.D. 79 which buried Pompeii (7, 8); seven of these also can be identified in

the stratigraphic record. Then a period of almost 500 years elapsed during which no unequivocal eruptions occurred; this period ended with the large 1631 eruption. Since 1631, however, the volcano has erupted at intervals of no more than a few decades.

At Fuji, another famous volcano with a long historic record (9), clusters of activity have been separated by dormant periods of varying length, up to 428 years; the volcano has now been inactive for more than 265 years. In contrast, Hekla Volcano in Iceland has erupted at least every hundred years or so since the island was settled (10). With respect to the volume of ma-

terial erupted into the air (in contrast to lava flows), Mount St. Helens has produced much less than did prehistoric Mount Mazama at the site of Crater Lake, Oregon, about 6600 years ago, or Tambora in the East Indies in 1815; the latter was one of the most voluminous (if not the most voluminous) explosive eruptions of historic time. The volume of ejecta produced by some of Mount St. Helens' largest eruptions of the last four millennia, however, has been similar to that produced at certain times by Vesuvius, Fuji, and Hekla. Tephra erupted from Mount St. Helens in 1900 B.C., for example, is estimated to have a volume

of at least 3 km³, and an eruption in about A.D. 1500 laid down roughly 1 km³ of similar ejecta. For comparison, the tephra from the 1707 eruption of Fuji is about 0.8 km³ in volume (9). The largest deposit from a historic Hekla tephra eruption in A.D. 1104 is about 1.5 km³ in volume (10), and the volume of the tephra deposit resulting from the Vesuvius eruption of A.D. 79 has been calculated to be about 2.6 km³ (11).

Dormant intervals of thousands of years during the older history of Mount St. Helens can be recognized from buried weathering profiles in volcanic deposits. The profiles indicate that the



Fig. 3 (left). Eruptions and dormant intervals at Mount St. Helens since 2500 B.C. The circles represent specific eruptions that have been dated or closely bracketed (11); the vertical boxes represent dormant intervals. The known eruptions at Mount St. Helens can be roughly grouped into four periods: 2500 to 1600 B.C., 1200 to 800 B.C., 400 B.C. to A.D. 400, and A.D. 1300 through about the middle of the 19th century. Dormant intervals have typically lasted no more than a few centuries, and the recent behavior of the volcano has been variable. Fig. 4 (right). Volcanic activity at Mount St. Helens compared with the activity at Vesuvius (7, 13), Fuji (8), and Hekla (9), as shown by the historical records (upper scales) and the stratigraphic record (lower scales). The recent stratigraphic record at Mount St. Helens, together with the early 19th century historic record, suggests that if the area had been occupied by record-keeping people, the eruptive history would resemble that of some volcanoes for which long written records are available. Some eruptive episodes probably were virtually single large events; others probably were smaller events repeated at intervals of a few years over a long time.



Fig. 2. South side of Mount St. Helens volcano (altitude, 2950 m). The summit consists of a volcanic plume probably erupted between A.D. 1600 and 1700. Lava flows on the lower flank of the volcano in the center of the photograph are marked by sharp, curved ridges (arrows) formed along margins of flowing lava.

UNITED STATES DEPARTMENT OF AGRICULTURE

SOIL CONSERVATION SERVICE

Room 360 U.S. Courthouse, Spokane, Washington 99201

March 17, 1975


Spencer T. Moore
Forest Supervisor
Gifford Pinchot National Forest
500 West 12th Street
Vancouver, Washington 98660

Dear Mr. Moore:

Thank you for the opportunity to review your draft environmental statement for the Clear Creek Planning Unit, Gifford Pinchot National Forest, Washington. We find the report adequately addresses itself to the problems as presented, and we have no further comments to make at this time.

If we can be of assistance to you in the future on this or any other project, please let us know.

Sincerely,


Galen S. Bridge
State Conservationist

weathered deposits were exposed at the surface for a long time before being covered by products of the next eruption. Radiocarbon dating of the youngest weathered deposit in such a profile, as well as of the oldest deposit above it, discloses the approximate length of a dormant interval. The imprecision of the radiocarbon dating method, which amounts to only a few hundred years, is minor relative to the total length of the dormant interval.

Dormant intervals of a few centuries are hard to recognize because weathering profiles developed in such short intervals are weak. The lengths of short intervals are also determined by radiocarbon dates, but the imprecision of the method is then large relative to the length of an interval. However, the radiocarbon method seems adequate to approximate intervals of several hundred years (Fig. 3) where there are many dates and good stratigraphic control.

During the last four millennia there has not been a dormant interval of as much as a thousand years at Mount St. Helens. Within this time, however, there were five or six intervals of more than two to about five centuries before A.D. 1800 during which the volcano seems to have been dormant. In addition, 12 dormant periods of one or two centuries in length have tentatively been identified, and many intervals of a few years or a few decades surely occurred during extended periods of eruptive activity.

A forecast. The repetitive nature of the eruptive activity at Mount St. Helens during the last 4000 years, with dormant intervals typically of a few centuries or less, suggests that the current quiet period will not last a thousand years. Instead, an eruption is likely within the next hundred years, possibly before the end of this century. Because of the variable recent behavior of the volcano, we cannot predict whether the next eruption will be of basalt, andesite, or dacite, and whether it will produce lava flows, pyroclastic flows, tephra, or volcanic domes. But if the eruptive period lasts years or decades, a variety of eruptive events and lithologic types can be anticipated (12).

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7 FEBRUARY 1975

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- 11 L. Urey, T. Fescanore, H. Booth, G. P. L. Walker, *Geol. Soc. Am. Bull.* 84, 759 (1973).
- 12 The kinds and areal extents of volcanic hazards that can be expected to accompany future eruptions of Mount St. Helens have been assessed (D. R. Crandell and D. R. Mullineux, in preparation).
- 13 The radiocarbon dates used in this report were based on the best known half-life determination and were corrected for possible initial variations in $\delta^{13}C$ concentrations by using H. E. Suess' tree-ring calibration curves [*Nobel Symp. No. 12* (1970), pp. 303-311].

11 October 1974; revised 10 December 1974

Callisto: Disk Temperature at 3.71-Centimeter Wavelength

Abstract. We observed the radio emission of Callisto with a three-element interferometer at the time of the 1973 opposition of Jupiter. Special care was taken to remove the residual, unresolved contribution from Jupiter itself in the antenna side lobes. The resulting disk temperature at a wavelength of 3.71 centimeters, assuming a radius of 2500 \pm 75 kilometers for Callisto, was $101^\circ \pm 25^\circ K$. This temperature is much more consistent with emission from a simple dielectric sphere than the considerably higher temperatures that have been reported for wavelengths of 3.5 and 8.2 millimeters.

To determine the feasibility of making radio measurements of the Galilean satellites, one can calculate approximately what flux density to expect for thermal emission from a given satellite at a given wavelength. The radii are known from optical measurements, the disk-average temperatures can be estimated from infrared measurements or from equilibrium considerations, and a guess can be made for the radio emissivity. The Galilean satellites turn out to be very weak radio sources but, nevertheless, are well above the detection limit for some existing instruments in the wavelength range from a few millimeters to a few centimeters.

In this case, however, the detection limit is not the only constraint. Another problem is the close proximity of Jupiter, a radio source about three orders of magnitude stronger than the Galilean satellites. This problem has delayed attempts to measure the disk temperatures (T_d) of the Galilean satellites, and it makes Callisto the easiest satellite to measure and Ganymede the next easiest, partly because of their larger sizes but mainly because of their larger distances from Jupiter.

The first published measurement was that of Gorgolewski (1). The resulting T_d for Callisto at a wavelength (λ) of 3.5 mm was $276^\circ \pm 87^\circ K$, assuming a radius of 2500 km. This is about twice the value that was expected, and an attempt to explain the high value was

made by Kuz'min and Losovsky (2). They assumed that Callisto has a thick ice crust (3) that is very transparent to radio waves and has a temperature gradient that increases toward the interior. For their model they argue that in the microwave range one will "see" a brightness temperature of 200° to $220^\circ K$ independent of the frequency.

Evidence has been reported (4) for water ice or frost on Callisto, but for only a small fraction of the surface area. Kuz'min and Losovsky argue that there may be a very thin layer of silicate debris overlying and obscuring the ice. A serious difficulty, however, is the very large penetration depth determined by Kuz'min and Losovsky and required to get a significant brightness temperature enhancement from their model. The ice will be very transparent, to be sure, but a penetration depth of many tens of kilometers, as required, appears to be some orders of magnitude too large according to recent determinations of the opacity of ice. The next published measurement was by Kuz'min and Losovsky (5). Their result at $\lambda = 8.2$ mm was $T_d = 234^\circ \pm 100^\circ K$, assuming a radius of 2500 km. They believed that this measurement gave added support to their model.

To shed some light on these matters and to gain experience in difficult detection observations, we measured the T_d of Callisto at $\lambda = 3.71$ cm near



United States Department of the Interior

OFFICE OF THE SECRETARY
PACIFIC NORTHWEST REGION
P.O. Box 3621, Portland, Oregon 97208

March 19, 1975

ER-75/128

Mr. Spencer T. Moore
Forest Supervisor
Gifford Pinchot National
Forest

500 West 12th Street
Vancouver, Washington 98660

Dear Mr. Moore:

We have reviewed the Draft Environmental Statement for the Clear Creek Planning Unit, Gifford Pinchot National Forest, Washington. Our comments follow.

GENERAL COMMENTS

While approximately 6,100 acres of the planning unit are considered "suitable for developed recreation sites," we are concerned that the document does not provide a time frame for recreation development. For example, the proposed Clear Creek trail and the proposed 14 acre picnic area at Lower Falls are briefly mentioned and described, but the reviewer cannot determine when these new recreation areas will be available for use.

For assistance in preparing recreation development plans, we recommend the Forest Service coordinate directly with the State Liaison Officer and incorporate information contained in the Washington Statewide Comprehensive Outdoor Recreation Plan. The Washington State Liaison Officer is Stanley E. Francis, Administrator, Interagency Committee for Outdoor Recreation, 4800 Capitol Boulevard, Tumwater, Washington 98504.

It is our understanding that full timber yield will be realized on 51,840 acres of the planning unit. Since clearcutting is to be the most common practice used,

we believe the Forest Service should discuss the impact of timber management activities on scenic resources in Chapters II, III, IV, and V.

The Forest Service has pioneered in the inclusion of landscape management when preparing plans for timber harvest on specific management units. We are concerned that this experience has not been utilized in the subject statement. Several Forest Service publications deal with various landscape management techniques.

A discussion of past harvesting practices involving 500,000 MBF and the effects on soils, water quality, wildlife and reforestation of the harvested areas would improve the statement.

In general, the statement needs more specific, quantified descriptions of impacts on fish and wildlife. More emphasis could be given to the importance of old growth timber to species such as the northern spotted owl and to the dependence on snags of cavity-nesting birds such as woodpeckers, nuthatches, bluebirds, and wrens. Also, it is difficult to assess if adequate areas have been assigned to various uses such as wildlife management and wilderness when the EIS covers only a small area of the total national forest. A table or short section should be included listing the proposed areas and acreages for each classification in the whole of Gifford Pinchot National Forest.

The habitat for many nongame species would be better protected and maintained by designation of more of the area to a roadless or backcountry status. However, management for deer and elk will be enhanced by clearcuts. This is especially true of the high-quality habitat in the Spencer Butte-Cussed Hollow drainage. Interspersion of small clear cuts in stands of old growth timber would provide the most diverse wildlife habitat and would be of most benefit to both game and nongame species.

Since this is a comprehensive management plan, and there is a responsibility to relate to the public, if there is a plan to educate the public concerning unit resources and management, it could be described in the proposal.

SPECIFIC COMMENTS

Page 25, Visual - This section should describe the

Pages 36-38, Timber - Clearcuts, as they appear in the photographs on pages 5 and 6 are quite severe in their visual impact. It is true these are old clearcuts and not necessarily the trend that future clearcuts will take. However, the final statement should indicate that consideration will be given to modifying the shapes and sizes of cleared areas in accord with the Forest Service's Visual Resource Management System.

Page 41, Environmental Impacts - The section on environmental impacts has little quantification in many cases and the exact environmental effects of the various proposals cannot be easily identified.

Page 42, Social and Economic Impact - It is stated that the proposed action will contribute both to recreation and timber aspects of the local economy. The next paragraph says the timber harvesting will have a measurable impact on the local communities. Both statements are undoubtedly true. However, quantification of these impacts might help. An estimated number of man-years direct employment, necessary to accomplish the various activities of forest management, would be one indicator--also a consolidation of visitor days relating to recreation lends quantification to the impact assessment.

It is also stated that "recreation within the unit will produce significant impacts upon the towns of Woodland and Cougar." More evaluative and descriptive information on these impacts is needed.

Page 44, Wildlife - The final statement should provide quantitative information to explain the statement that "roads and other construction projects will remove a certain amount of the Planning Unit from wildlife habitat."

Page 45, Favorable Effects - Much of the discussion in this section seems to emerge as a justification of alternative 1 and not as a thorough discussion of environmental impacts. The judgments as to the quality of the environmental effects of the various alternatives should be left to the reviewer.

Pages 45-46, Social and Economic - Timber harvest and road construction are described as favorable environmental effects. This appears somewhat justificatory when related to timber production goals. The final statement should consider the effects of these activities more objectively.

existing visual resource, including scenic quality, geologic features, land forms, vegetation, water, etc. The description should cover what people come to see or will see when they are there and what features are not acceptable in existing scenery. The photos on pages 5 to 9 do not provide an adequate evaluation of Visual Resource Management.

Page 31, Historical and Archeological - Compliance with the National Environmental Policy Act should be coordinated with the separate responsibilities of the National Historic Preservation Act of 1966 and Executive Order 11593 to ensure that historical and archeological resources are given proper consideration. Briefly, cultural resources should be treated the same as other aspects of the environment, i.e., they should be inventoried, their significance evaluated, impacts upon them assessed, and mitigative measures discussed in environmental statements. This statement does not give such coverage to cultural resources.

We do not agree with the statement on page 31 that, "The Proposed Action will serve to maintain the opportunity for discovery of additional sites..." Though perhaps true for lands which will remain undisturbed, it definitely is not true for lands which are designated for timber harvest or other surface disturbing activities. For clarification purposes, we suggest the following be added at the end of this paragraph:

"Prior to initiating any ground disturbing project resulting from this plan, a reconnaissance or more intensive inventory, if necessary, will be conducted to identify historical and/or archeological sites or areas."

This statement was taken from your page 41 discussion of impacts.

We recommend that the section on mitigation contain a commitment and a formulated plan to carry out a long-term, comprehensive archeological/historical survey in compliance with Executive Order 11593. Such a survey is necessary in addition to interim surveys in advance of any ground disturbing project.

Page 34, last paragraph - The Boundary Trail No. 1 borders an area designated for timber harvest. Since this is a ridge top trail, a brief discussion of the visual effects of timber harvesting on scenic viewing would be appropriate.

cc:
 Council on Environmental Quality (5)
 Director, Office of Environmental
 Project Review
 Director, Bureau of Land Management
 Director, Bureau of Outdoor Recreation
 Director, Fish and Wildlife Service
 Director, National Park Service
 Director, Geological Survey
 Director, Bureau of Mines
 Commissioner, Bureau of Reclamation
 Commissioner, Bureau of Indian Affairs
 State Director, Bureau of Land Management,
 Oregon (Washington)
 Regional Director, PNW Region, Bureau
 of Outdoor Recreation
 Regional Director, PNW Region, Fish
 and Wildlife Service
 Regional Director, PNW Region, National
 Park Service
 District Chief, WRD, Geological Survey,
 Washington
 Asst. Director, Western Region,
 Geological Survey
 Chief, Western Field Operation Center,
 Bureau of Mines
 Regional Director, PNW Region, Bureau of
 Reclamation
 Area Director, Portland Area Office,
 Bureau of Indian Affairs

Page 47, paragraph 3 and page 100, footnote - The timber harvesting level for the proposed action and alternatives 2, 3, and 4 appears to include timber volume from 2,000 acres of private land (page 100, Table 100, footnote), however, on page 47 the statement is made that "No firm proposal for acquisition has been made." The rationale for including the volume from these lands should be discussed.

Page 49, Wildlife and page 52, Vegetation - The statement that harvested areas will provide grasses, low brush, berries, and similar vegetation for several years conflicts with the statement on page 52, last paragraph, that refers to herbicide spraying projects to combat brush encroachment on recently harvested areas.

Page 49, Logging Slash and page 52, last paragraph - It is stated that logging slash left on the ground provides good cover and protection for many small birds and mammals. This conflicts with the statement on page 53, first paragraph, that suggests logging slash and debris must be burned or removed because it is a fire hazard.

Page 52, paragraph 3 - The adverse effects upon tree regeneration is mentioned, but the severity of the problem is not quantified.

Brush fields sprayed indiscriminately destroy important sources of browse for big game animals as well as habitat and food for smaller animals, raptors, and small birds.

Page 54, Wildlife - Possible adverse effects to wildlife from the use of herbicides should be discussed in this section.

Page 124, Glossary - The glossary definition of "visual resource management system" appears to be a discussion of what should be done and not what actually will be done, which would be of more interest to the reviewer.

Sincerely yours,

Roy H. Sampsel
 Roy H. Sampsel
 Special Assistant
 to the Secretary

The trail to Blue Lake from Wright Meadows is a prime example. Let trail bikes on some of these trails to keep them open. They have to clear them to get through. We have been on trails walking and occasionally bikes, we have yet to encounter the animosity that some people voice on bikes. We have talked to people who thought bikes should be eliminated from the woods, then discovered that they had never been on a trail, much less rode on a bike. Bikers have had a lot of bad publicity, some of it well deserved, but not as a whole. Horseback riders can be just as bad. We've had to clean camps of horse manure before we could use it. Public land is for all, not a select few. All we have to do is be compatible. That sounds like a quotation from Christ.

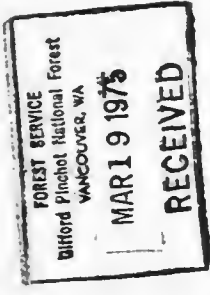
As for the alternatives, none fit exactly, No. 5 could be modified by less timber harvesting and giving some unroaded and wilderness areas. Make Clear Water campground bigger with a play area, clean up existing trails and roads (washouts).

Sincerely,

Karl W. Janson

Karl W. Janson

kgj



308 Todd Road
Kalama, Wash. 99625
February 6, 1975

Spencer T. Moore, Forest Supervisor
Gifford Pinchot National Forest
500 West 12th Street
Vancouver, Wash. 99660

Dear Mr. Moore:

We received the Draft Environmental Statement on the Clear Creek Planning Unit. It was read and discussed by our group. First, we would like to thank you for the book of information and opportunity to reply.

We are interested in camping, hiking, just looking, fishing, hunting, driving, biking, and the state of the nation. Not necessarily in that order for importance.

The present regime that gives orders to the St. Helens Forestry Department seem to be selling out the area to the highest bidder, and at the same time, keeping the public out so they won't notice the fact. We agree that too many people can ruin an area, but also, too much timber harvest can cause much more damage.

Many people like to camp at a campground like the one on the Clear Water and Muddy, just to be out. We would like to see this enlarged and a play area for ball games and other children sports be included here. We feel this would keep a good share of the youngsters where they would do less harm to the forest and creeks and still let them enjoy themselves.

How about establishing a camp designation for "self contained units only", for people who wish to park for a day or weekend and walk into a section of creek, lake or scenic area, small places with no conveniences.

On trails: let's keep the trails up off the creeks and lakes where people can see the water, but far enough away to protect it and the fishing.

Why is it necessary to have a trail up either the Clear Water or Clear Creek? These are both good fishing creeks, let's keep them that way.

Why build new trails when the existing ones aren't kept up? There is nothing more aggravating than planning a hike, only to spend all the time allotted just trying to find a trail where logging has obliterated it. Aren't there any provisions for loggers to put a trail back after logging over it?



WASHINGTON
Department of
FISHERIES

DANIEL J. EVANS
GOVERNOR

ROOM 115, GENERAL ADMINISTRATION BUILDING • PHONE 753-6600
OLYMPIA WASHINGTON 98504

DONALD W. MOOS
DIRECTOR

March 20, 1975

Mr. Spencer T. Moore
Forest Supervisor
Gifford Pinchot National Forest
500 West 12th Street
Vancouver, Washington 98600

Dear Mr. Moore:

This is in response to your request to review and comment on the Draft Environmental Impact Statement "An Impact Analysis Clear Creek Planning Unit Gifford Pinchot National Forest."

As you correctly stated on page 26, there are no anadromous fish in or near the unit, as they are blocked by Merwin Dam far downstream.

Our department does not have any comment to offer other than no adverse effects are expected on the food fishery resource.

Thank you for the opportunity to review and comment on the Draft Environmental Impact Statement.

Sincerely,

Donald W. Moos
Director

Gene Deschamps
Gene Deschamps, Biologist
Stream Improvement & Hydraulics

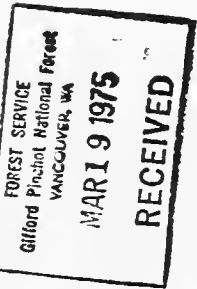
DWN:GD:bj

cc: Dept. of Game
Dept. of Ecology
Management & Research/Holland
OPP&FM/Mike Mills

VASCO J. FENILI
7102 CITRINE LN.
TACOMA, WASH.
98498



7102 Citrine Lane, SW
Tacoma, WA 98498
17 March 1975



Mr. Spencer T. Moore, Forest Supervisor
Gifford Pinchot National Forest
500 West 12th Street
Vancouver, WA 98660

Dear Mr. Moore:

I have thoroughly reviewed your Draft Environmental Statement for the Clear Creek Planning Unit and strongly recommend adoption of Land Use Alternative No. 2.

Alternative No. 2 is the only course which leads away from over-exploitation of the natural resources of this Great Northwest. We must retain as much wilderness as possible to offset the burgeoning urban and suburban sprawl. This Alternative is the only one that attempts to achieve stated. Yet, it provides adequate recreation facilities. In fact, the camp units and picnic sites could well be reduced by one-half the totals. I very much appreciate the opportunity to comment.

Sincerely yours,
Vasco Fenili



Director, State Planning Division
Office of Program Planning and Fiscal Management
House Office Building
Olympia, Washington 98504

DEPARTMENT OF GAME

600 North Capitol Way, Olympia, Washington 98504

March 24, 1975

Mr. Mike Mills, State Planning Division
Office of Program Planning and Fiscal Management
House Office Building
Olympia, Washington 98504

Attention: Spencer T. Moore, Department of Agriculture

Dear Mr. Mills:

Your draft environmental impact statement - An Impact Analysis, Clear Creek Planning Unit, Gifford Pinchot National Forest - was reviewed by our staff as requested. Our comments follow.

This impact assessment lays out five separate alternative management plans for Clear Creek Planning Unit segment of Gifford Pinchot National Forest. The environmental impact analysis appropriately centers around the proposed alternative management scheme (Alternative 1). This analysis is general in nature and does not treat adverse impacts in detail. We hope more detailed information will be included in the final draft on adverse impacts which are pointed out in review comments submitted to your agency.

A notable adverse impact of the proposed plan is its removal of all inventoried roadless and undeveloped areas from wilderness status consideration (see page 101). An alternate plan is presented which appears to include many of the features of the proposed plan, while maintaining a wilderness option -- Alternative Plan 2 (pages 58-68). However, adverse environmental effects associated with Alternative 2, are not discussed in a detailed manner. Therefore a firm foundation is not provided on which to base a decision whether Alternatives 1 or 2 would result in least adverse environmental impact while accomplishing major project objectives.

We feel this is unfortunate and suggest the final impact statement include a comparative analysis of the adverse resource impacts associated with Alternatives 1 and 2. This should allow decision makers a greater opportunity to objectively analyze the wilderness question and the trade-offs involved. Special emphasis on comparative human use densities (recreation) and associated impacts would be appreciated. Similarly, the trade-offs involved with the two alternatives with respect to wildlife resource integrity, management efforts, and recreational use (i.e. hunting, passive uses, etc.) would be helpful.

Mike Mills

-2-

March 24, 1975

Additional comments on your assessment of adverse effects follow.

Adverse Environmental Effects Which Cannot Be Avoided

Herbicide spraying projects are suggested as a means of combating brush encroachment (Vegetation subsection, pages 52-53). A discussion of the effects which such spraying has on other natural resources (water quality, wildlife, etc.) would be appropriate and is recommended. Similarly a discussion is needed of other methods which could be used to minimize adverse effects while accomplishing the same objective (i.e., tree production).

The attention given stream degradation which results with improper timber harvest, road development and other activity is appreciated. Measures which will be taken to remedy this situation deserve discussion.

You indicated in the "Wildlife" subsection that no detailed wildlife management plan has been made for the Clear Creek Planning Unit. An indication of when this plan will be prepared would be appropriate. In this same section, adverse impacts on wildlife which will be experienced with the proposed plan are discussed in a general way. No specific measures are proposed to mitigate these adverse effects, however. Rather it is stated, "These impacts can be minimized by limiting access and management activities during critical periods." Further specificity in the final statement on the types of mitigation measures which will be taken is recommended. Points which could be covered include modifications in cutting practices, herbicide use, protection of valuable elk habitat, and other measures.

Thank you for sending your statement and providing us an opportunity to comment. We hope our comments will be helpful.

Sincerely,

THE DEPARTMENT OF GAME

Eugene S. Dziedzic, Asst. Chief
Environmental Management Division

ESD:jb
cc: Frank White
Agencies

24 MARCH 1975

FOREST SUPERVISOR
GIFFORD PINCHOT NATIONAL FOREST
500 WEST 12TH STREET
VANCOUVER, WASHINGTON 98660

DEAR SIR

REF: DRAFT ENVIRONMENTAL STATEMENT--AN IMPACT ANALYSIS
CLEAR CREEK PLANNING UNIT GIFFORD PINCHOT NATIONAL
FOREST, USDA-FS-R6-DES(ADM) 75-06

I AGREE WITH THE PROPOSED ALTERNATIVE NO. 1 AS WRITTEN
IN THE DRAFT STATEMENT. OFF THE ROAD VEHICLES SHOULD
BE KEPT ON THE ROADS AND SNOWMOBILES SHOULD BE KEPT
ON DESIGNATED ROADS DURING THE WINTER.

THANK YOU

Harry E. Wilson
HARRY E. WILSON
2120 NORTH CALLOW AVENUE
BREMERTON, WASHINGTON 98310



BOARD OF COMMISSIONERS

SKAMANIA COUNTY

Stevenson, Washington 98648

ROBERT J. HOLCOMB - District 1

DEAN O. EVANS - District 2 ROBERT E. ROGERS - District 3

GIL TODD - Clerk

March 24, 1975

RE: Clear Creek Planning
Unit - Draft Environ-
mental Statement

Spencer T. Moore
Forest Supervisor
Gifford Pinchot National Forest
500 West 12th Street
Vancouver, Washington 98660

Dear Mr. Moore:

We favor Land Use Alternative No. 1 for this planning unit, except for the un-
roaded area along Clear Creek. We recommend a portion of this unroaded area,
as shown on the attached map, be classified Marginal Commercial Forest Land.
We do not feel this area should be classified Unroaded because of the steep
ground, rock bluffs and rock outcrops. We recommend the forest consider spe-
cial logging techniques, such as long distance skynes to harvest timber in
this area.

We also recommend the proposed picnic area at Lower Falls on the Lewis River
to include overnight camping for tent campers.

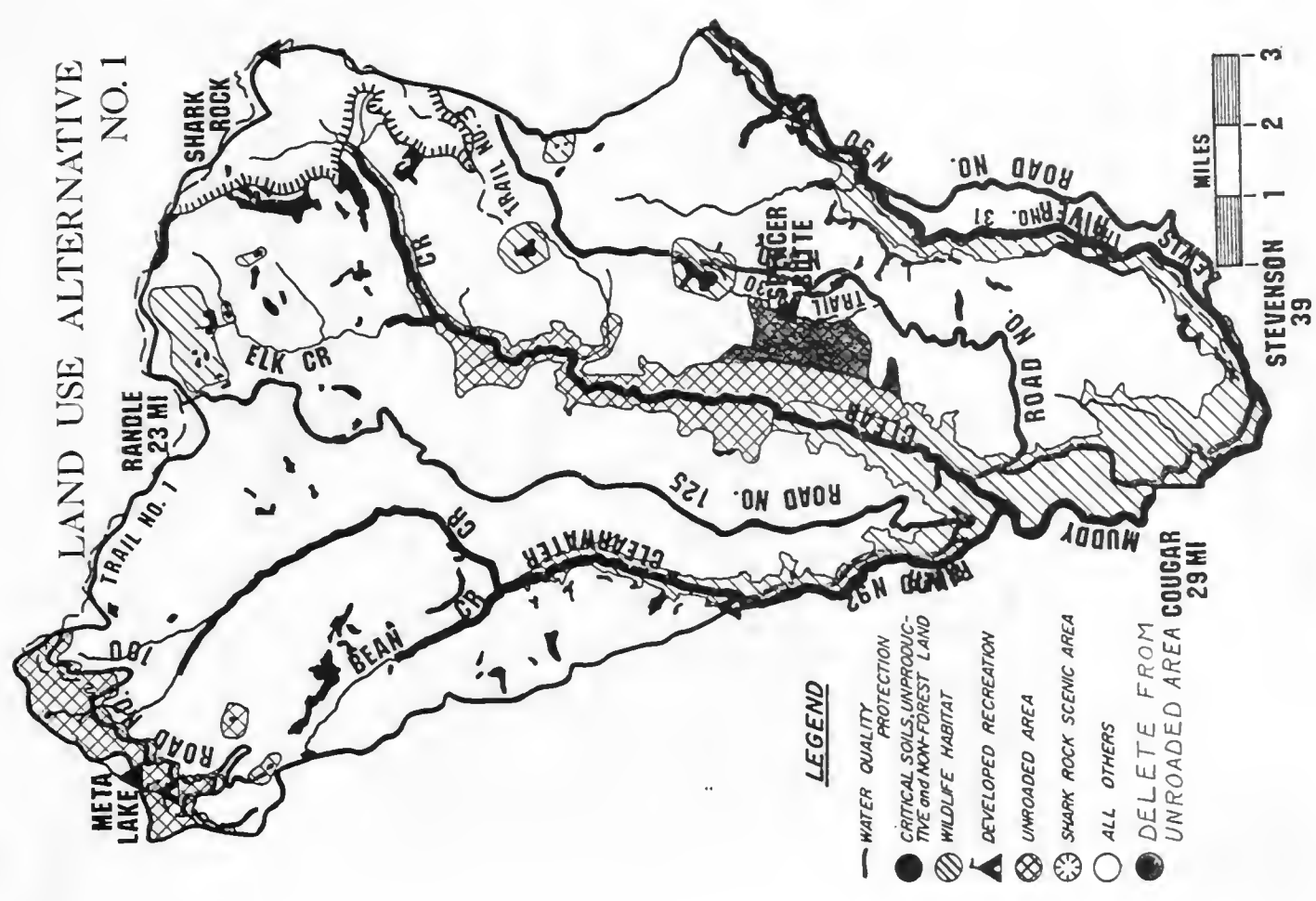
Sincerely yours,

Dean O. Evans
DEAN O. EVANS
Chairman, Board of
County Commissioners

DOE:vif

Enclosure

LAND USE ALTERNATIVE NO. 1



March 21, 1975

Spencer F. Moore, Forest Supervisor
 Gifford Pinchot National Forest
 500 W. 12th Street
 Vancouver, Washington 98660

Re: Clear Creek Planning Unit

Dear Sir:

In my letter of April 8, 1973 I urged that acceptance of alternative 2. With the modifications that have been made in the Draft Environmental Statement I now believe that Land Use Alternative No. 1 is in the best long range interest of the forest and the community.

Since the hearings that you had on this planning unit in 1973 we have had the energy crisis that has significantly changed our way of looking at many things. I believe that the use of motorized vehicles on foot trails in the planning unit should be carefully controlled and their use on most of the trails should be prohibited. The motor vehicles disturb the quiet forest environment for the foot travellers, and the vehicles cause more wear and tear on the trails than foot travel.

The one figure that shocked me in this environmental statement was the 100,000 tons of slash that would be burned every year. I look upon the air pollution this causes as a relatively minor problem because the unit is so remote from populated areas.

The economic waste is enormous. I am sure that, do not burn slash like this in Japan or in Europe. There probably is a value/distance relationship that makes this a difficult economic problem, but I think Forest Service research should address itself to the problem. Perhaps an economic system could be developed for yarding, whole trees, reducing them at the landing; to logs, fiber chips, and fuel chips, and all hauled out of the forest for their greatest economic use. It would reduce the fire danger, and it would leave a clear site on which reforestation could begin immediately. If trees of Christmas tree size were growing on clear cuts within a few years after harvest, I am sure there would be much less objection from the public to clear cutting. I am sure that there are no easy solutions, but I do recommend that the Forest Service try to find them.

Sincerely yours,

Harris Dusenbery
 Harris Dusenbery
 203 W. 32nd St.
 Vancouver, Wa. 98660



DEPARTMENT OF THE ARMY
PORTLAND DISTRICT, CORPS OF ENGINEERS
P. O. BOX 2946
PORTLAND, OREGON 97208

REPLY TO
ATTENTION OF:

NPPEN-EQ

26 March 1975

Mr. Spencer T. Moore
Forest Supervisor
Gifford Pinchot National Forest
500 W. 12th St.
Vancouver, Washington 98660

Dear Mr. Moore:

The draft environmental impact statement for The Clear Creek Planning Unit, Gifford Pinchot National Forest, Washington, which you furnished to our North Pacific Division Office, has been referred to this District Office. We have reviewed the statement and have no comments relating to the Corps of Engineers' functional area of responsibility and expertise, basically: flood control, navigation and hydro-power.

This opportunity to review and comment on the draft statement is appreciated.

Sincerely yours,

L. J. Stein
for L. J. STEIN
Chief, Engineering Division



United States Department of the Interior

BONNEVILLE POWER ADMINISTRATION
P. O. BOX 3621, PORTLAND, OREGON 97208

OFFICE OF
THE ADMINISTRATOR

In reply refer to: AJ

March 25, 1975

Mr. Spencer T. Moore
Forest Supervisor
Gifford Pinchot National Forest
500 West 12th Street
Vancouver, WA 98660

Dear Mr. Moore:

We have reviewed the Draft Environmental Statement for the Clear Creek Planning Unit, Gifford Pinchot National Forest, Washington, and find that we do not have any facilities in existence within the boundaries of this planning unit, nor do our long-range plans include any facilities within this unit.

There are, however, two snow courses operated by the Soil Conservation Service which lie within the boundaries of the unit.

Name	Station No.	Lat.	Long.
Lone Pine Shelter	21C26	46°16'	121°58'
Spencer Meadow	21C20A	46°11'	121°56'

We appreciate the opportunity to review and comment on this draft.

Sincerely yours,

E. Willard
E. Willard
Assistant to the Administrator -
Interagency Relations



Save Energy and You Serve America!

John M. Allinger
P.O. Box 11111

Longview, WA 98632

March 28, 1975

Mr. S. T. Moore, Supervisor
Gifford Pinchot National Forest
P.O. Box 449
Vancouver, Washington 98660

Re: DES - Clear Creek
Planning Unit

Dear Mr. Moore:

I appreciated receiving a copy of the above referenced environmental statement with an invitation to comment on the proposed plan.

Pages 1 & 2, Description.

Detail should be provided on how the final management plan for this planning unit will be implemented. I understood the FES of this plan along with the Land Use Planning Team's data, including maps, would be utilized by the District Ranger's staff in managing the resources in the area covered by this plan, and this data should be referred to as part of this plan.

Pages 32 & 33, Land Ownership and Status.

The proposal to acquire ownership of all private lands within the planning unit should be retained in the final plan.

I think the proposal to manage lands that would be affected by construction of the proposed Muddy River Dam as if the Dam would not be constructed in good.

Page 33 - 35, Recreation.

The Shark Rock Scenic Area should be reestablished as proposed, with alterations to the boundaries. These alterations would be to include the meandered out or excluded tributary drainages at the headwaters of Clear Creek (this area also being at the upper end of the roadless area corridor along Clear Ck.), and inclusion of all high ridge area west of Blue Lake (just outside the planning unit boundary to the east) to perpetuate the natural, remote, scenic "atmosphere" of the basin at Blue Lake.

3126 Columbia Heights Rd
Langview, Washington 98632
March 27, 1975

Gifford Pinchot National Forest
500 W 12th St.
Vancouver, B.C. 98660

Mr. Spencer T. Moore

In reviewing the Clear Creek Planning Unit, Alternative 2, with the following recommendations and changes, is preferred:
1. Continue to make efforts to obtain ownership of private lands within the unit.
2. Urge the Federal Power Commission and Pacific Power and Light to abandon plans for hydroelectric projects along the vicinity of headwaters.
3. Ban exploration rights for developing geothermal power, and mineral rights.
4. Ban trail bikes and motorized vehicles except on roads, or for emergencies.
5. Close off road see completely and develop as a fallow ski trail for hikers and cross-country skiers.
6. Close off road see at least view when other roads are already available for East west travelling.
7. Place a buffer roadless area from the west boundary to the wilderness area leaving just a narrow corridor for road use. Extend the wilderness to include all of trails 1 and 3 except where trails cross the roadless area.
8. More of the Muddy River area could be wilderness or at least roadless.
9. Roadless area to include all of the wilderness or trail 3. The areas north and south of Spencer Butte should be roadless except for a road corridor for road use.
10. Follow the idea expressed in alternative 1 of having no additional automobile campgrounds. Do not build family camps or picnic units, or scenic drives.
11. Improve and add to the existing trails in suitable and/or scenic areas.

Outdoor recreation is increasing, existing areas are often crowded so we need to preserve the resources that are left in the area. The planning unit boundary is at the pressures of multiple technology and ever consumption so we need to preserve areas where animals can live. People need to have a trail that leads to escape from the cities, the areas. Some of these wild areas for us and future generations.

John E. Moore

Mr. S. T. Moore
Re: DES - Clear Creek
Planning Unit
March 28, 1975

Page 2

The proposal for a roadless corridor and trail along Clear Creek is excellent, as is the proposed trail up Clearwater Creek.

The protection of the Meta Lake area as proposed is good. I wonder if this area shouldn't be completely protected pending completion of Wilderness suitability studies of the Mt. Margaret Candidate Wilderness Area. I cannot help but believe that surrounding areas (roadless) contributed "evaluation points" that helped qualify the Mt. Margaret area for Wilderness study.

The level of development of campgrounds and picnic areas should be specified.

In specifying management activities near the Lewis River Trail (#31) I feel it should be stated that no road will parallel the trail within $\frac{1}{2}$ mile to the north, that would remain open for public travel. Spur roads would be permitted closer to the trail, but would be closed to public motorized use. Trail #31 should be closed to motorized use and this should be stated in the final plan.

Page 36, Soils.

Reference should be made to mapped critical soils, and detailed maps showing inventoried critical soils should be referenced as part of this management plan.

Pages 38 & 39, Visual.

Reference should be made to the exhibit showing these Visual Resource Management System areas as mapped for this proposed plan.

Page 39, Water.

Which Streamside Management Unit goals apply to which streams? Is a map in order to display this information also? I think so!

Page 39 & 40, Wildlife.

Specifically what type of wildlife habitat management is proposed for the area along the Lewis River, Trail #31, and Road N90.

Specify no tractor logging on slopes in excess of 10% within 100 meters of lakes, ponds, marshes, and meadows. Permit climax forest types to develop within the aforementioned wildlife habitat zone, and encourage all timber harvesting within this zone to be small clearcut units.

I understand the Forest Service will announce a snag policy soon. Should a statement as to its applicability and affect on certain lands be a part of this plan?

Mr. S. T. Moore
Re: DES - Clear Creek
Planning Unit
March 28, 1975

Page 3

Pages 35 & 36, Roads and Trails.

Relocation of Trail #31 along the Lewis River above Crab Creek is a commendable proposal that should become part of the adjacent unit plan for that area.

Would it be possible to announce the completion of environmental analysis of a road project where this analysis reveals possible significant impacts or recreational or scenic values? A policy statement to this effect would make an excellent addition to this part of the proposed management plan.

I hope that you can utilize some of my comments in reviewing the draft environmental statement for this plan, and where you can, make suitable adjustments in the proposed plan. I would like to see more of the Land Use Planning Team's overlays used with the addition of section lines on the overlays.

Sincerely,


John M. Allinger

cc: District Ranger
Regional Forester
County Commissioners
Congressmen



by Ansel Adams in *This is the American Earth*

SIERRA CLUB

OFFICE OF THE NORTHWEST REPRESENTATIVE

4534 1/2 University Way, N.E.
Seattle, Washington 98105
(206) 632 6157

March 28, 1975

Mr. Spencer T. Moore
Gifford Pinchot National Forest
500 West 12th St.
Vancouver, Wn 98104

Dear Mr. Moore

RE: Clear Creek Planning Unit

Attached is a detailed review as to the adequacy of the Draft Environmental Impact Statement for this planning unit.

Due to the personal knowledge and use of this area by members of the staff here in Seattle, we have some additional comments on the proposed action in addition to those submitted already by the Chapter.

As the Chapter's recommendation points out, it is highly desirable to manage the area within the immediate Lewis River canyon, not only with a priority for wildlife, but in a roadless state as well.

The Chapter's attention to the Trail No. 3 is also very important, and the possibility of a roadless trail corridor for this trail should be considered. Similarly, a roadless corridor for the Cussed Hollow trail (which doesn't even show on most of your maps) is worthy of consideration.

Indeed, the fact that most of the old trail system is apparently to be written off is one of the distressing features of this action. While the trails not shown, with the exception of the Cussed Hollow trail, need not have special management corridors, the vast majority of the trail system should be given minimal maintenance at least, and not be obliterated and abandoned.

Lastly, logging is proposed along most of the Spencer's Butte trail and apparently on the lower slopes of the Butte itself. The Butte is an area of considerable summer wildlife use, an area of geological interest, and an accessible recreational asset. As such, the area between the trail and the present road should be allocated for roadless management, and no roads should be allowed to approach the trail from the west. Increasing human disturbance or access to Spencer's Butte would be a mistake.

Sincerely,
David Pavelchek

David Pavelchek, Staff Asst.

Clear Creek DEIS, Gifford Pinchot National Forest
Sierra Club NW Regional Office. 3/27/75

There is a great quantity of data not presented in the statement which would be of invaluable assistance to the decision making process. Maps of soil and erosion hazard, timber site class and stratification, and particularly the current status of the planning unit (all roads and existing cutting units) are obvious types of information which would greatly encourage understanding of the proposed action. The lack of this type of information makes effective review impossible.

In addition, there are a number of existing problems within the unit, that are not even mentioned, much less adequately discussed. Road 100 is plagued with continuous erosion problems. Its construction is believed by many to have been a mistake. Yet closure of this road is nowhere considered.

Similarly, N 90, the paved main system road along the Lewis River has experienced severe erosion and siltation problems at and in the vicinity of Alec Creek. To be blunt, at one time, within the last two years, a considerable quantity of rock, soil, and mature trees was sliding downhill from the road directly into Alec Creek. This problem, nor the problems with road crossings of active natural slides in the vicinity are anywhere mentioned.

Many of the areas clearcut along the Lewis River and in the adjoining flat benches above the river, are suffering from massive brush invasion which is creating regeneration problems. Again we find no mention.

Specific comments are as follows:

p.14 Regurgitation of a severely flawed past analysis is not a valid means of describing wilderness potential. If you wish to use this data at all, please answer in your Final EIS all the objections raised in the Sierra Club et al comments on the DEIS on the RARE process. In particular, the comments relating to the subdivision of roadless areas are pertinent. In this case, it turns out that in reality there are two large roadless areas and one small one (Cussed Hollow). If each of the large roadless areas were not divided into four separate units, the Quality Index rating would be higher due to an increase on both the size and diversity factors. The other segments of the roadless area of which Upper Green is but a part received QI of 85, 170, and 61. All four segments would have received higher indices if they had been accounted to be part of a larger single roadless area. Similarly Shark Rock and Clear Creek are actually part of the larger area whose other segments were rated 63 and 93. Again here, the small size of the subdivided segments counted against them. The FEIS on IARR makes it abundantly clear that the RARE QI and selection criteria were very crude and inadequate, and that they did not encompass anything more than a blunt axe approach approach to locating some of the areas highly desirable for wilderness study. It is also abundantly clear that the

national Forest Service never intended the QI or selection criteria to be used at a later time as a basis for deciding to develop undeveloped roadless areas. The blunt inclusion of this fault-ridden misapplied data here is a mistake.

Continuing on the same page, we find that the other justifications given for discarding the areas for serious wilderness consideration to be also specious.

The dismissal of Clear Creek is transparent. The area gives an "excellent" feeling of isolation, but because the area is a long narrow strip, it isn't isolated or desirable. Yet, just at the west boundary of the planning unit is the Mt. Margaret Wilderness Study Area selected in the RARE program, which at that point is an even narrower strip a couple miles long.

The dismissal of Shirk Rock is absurd. The fact that one can see developed areas from Shirk Rock in no way disqualifies the area. Large portions of many of the existing wildernesses in Washington are within site developed areas. However, the reason is not even supported in fact. There are many parts of the Shirk Rock roadless area from which the only developed areas one can see are miles distant, rather than the area seeming to be an island surrounded by clearcuts. (One who has seen the area from the air must admit however, that the area is sadly, a fairly large island, but indeed surrounded by a sea of clearcuts.

Cussed Hollow is dismissed as being not unique, though it is admitted to have many desirable wilderness qualities. Apparently, the Forest Service does not consider the roadless Lewis River canyon unique or outstanding. However, I am at a loss to find a similar natural canyon in its undeveloped state in the Douglas fir region. As to outstanding, the Lewis River is rated by many as an outstanding recreational experience.

The dismissal of Upper Green is based almost exclusively on the slight of hand of making the other three contiguous roadless segments invisible. It should be noted that the adjoining segment to the west is a Wilderness Study Area, and that the supposedly "narrow" area is nearly square in shape, making it as wide as any 3,800 acre subsection of a roadless area can be.

The discussion of the roadless areas is a farcical exercise in deception. It is entirely negative. It should be remembered that what is needed here is not a justification of selection or non-selection neither for this proposed action nor for RARE, but a realistic factual appraisal of the qualities of the involved roadless areas in their entirety, and not as is presently done to subdivide and denigrate them using an undependable and blunt axe process complete with its artificial boundaries.

p. 17 the discussion of trails does not cover present maintenance or motorized use.

p.21 Projections for the future- What effect will two new mills have on the already unreasonable industry pressure on public lands for timber harvest in the area?

p. 23 Soils. A map is needed. The entire unit appears to have severe soil erosion potential. The effects of past development and activities should be discussed.

p.24 Timber- It is obvious that in past years the harvest exceeded the present allowable cut by a considerable amount; why was this allowed to happen?

p.25 Timber No site class map, no yield table for the varying site classes, no discussion of the existing regeneration problems, no regeneration map and no discussion of why the low potential sites are so classed.

p.26 Wildlife- Where do the osprey nest?

Where do the elk summer?

Why is there no more data on any other species than elk?

Why has there been no survey for endangered or unusual species?

What is the history of the fisheries resource during the recent developmental period? What size are the fisheries?

p.31 1st para- what is the proposed water quality monitoring program?

p.31 (a) Was there any attempt to search for archaeological sites?

p.32 2nd para.- Once land acquisition is complete, consideration should be given to closing Road 100.

p.33-2nd para.- Why aren't streambeds to be withdrawn now from mineral entry?

p.34 para.#3 Please show proposed recreational site on one of the maps.

p.34 para. #5 What effect will logging the area have on Trail #30?

p.35 para#3 In view of the soil conditions and limited trail maintenance monies, what justification is there for any motorized use?

p.35 para. #6 Will there be an attempt to segregate incompatible uses?

p.35 Roads and Trails - Some map, even a general one, of the proposed road network should be provided.

Will future trails be only in roadless areas? What ever happened to multiple use? Will there be any attempt to maintain the old trail network?

p.37 l. If 90% of the timber stand is overmature, what does this say about the regeneration and growth on lands harvested in the last 25 years?

p.38 3.- Why is noble fir the chosen species at higher elevations? Is it only because noble fir will do well in even age management? What is the average species composition of old growth stands harvested at higher elevations? What is the average species composition of the regenerated stand?

p.41 para.8- If this 'Sanitation and salvage logging' is to be accomplished without roads, how will this remove the area form consideration for protective classification?

p.42 para.9- How will the proposed action contribute to the recreation aspects of the local economy? Due to the considerable degree of development already present, it is very doubtful if any more road oriented recreation can be attracted and the action will certainly reduce the roadless recreation.

p.43 Decreasing mean age of the timber stand, changing the species composition and the general disappearance of brush species in some areas are not covered.

p.43 Water- This section is all about potential damages; damages should be quantified and it should be admitted that water quality currently is degraded by activities and that this is likely to continue, barring some great advance in logging and road building techniques.

p.44 Wildlife- None of these impacts are quantified.

What species will be affected by the reduction in snags? Is harassment of wildlife due to improved road access possible or inevitable?

p.45 Air- In light of the fact that road access is a factor tending to increase frequency of fires and most activity along roads occurs during these same dry summer months, is this really going to reduce summer smoke release?

p.45 Fire- you admit here that more people would use the unit if the roadless areas were preserved, yet elsewhere you claim recreation benefits, how can this be?

p.45 Social and Economic- you state here that a 2.2MMBF reduction in the allowable cut will have a negligible effect on all but the local economic and social parameters.

p.46 para #2- though mortality is 'waste' from a timber management point of view, it would be a good idea to look at it from some other points of view too, unless your running the national tree farms.

p.46 3. What will be the allowable cut effect of this deferral of harvest? We note that there is no land stratified into the "deferred" class.

p. 46 para.#5- seep.42 #9 and p.45 Fire

p. 48 Soils- admit increased soil movement due to planned development.

p.48 Vegetation- the disappearance of old growth and the associated micro-flora is not covered.

pp.48,49 Water - So which Alternative will have the least net impact on water quality?

p.51 Social and Economic- are there no social impacts from the action? Is the disappearance of de facto wilderness an action of no social consequence.

p. 52 para.1- the Forest Service should be commended on being completely capable of dealing with the unknown. I'd like however to see your reference for the assertion that you can deal with any soil nutrient or trace loss, even if it is unknown.

pp.52,53,54- in general, there is no quantification of impacts. About all that is said is that there will be impacts- this is clearly insufficient.

p. 58- The map for this Alternative points out another shortcoming of the process of evaluating the roadless areas in the unit. If even the boundaries of the roadless area had been reconsidered, the map of the wilderness alternative would look different. In fact, most of trail #3 is in de facto roadless area. This failure to check inaccurate data points out that serious consideration was never given to a larger wilderness or roadless proposal.

p.64 Social and Economic- how would this alternative de-emphasize water as a commodity?

p.66-67 why is a reduction of 2.2 MMBF described elsewhere as basically having negligible economic impact, and a 5.8 MMBF reduction not described as the same?

p.102 the data for 'Hiking and Riding' is not credible. How many people prefer to hike or ride through clearcuts? What part of the unit can't now be reached in three hours on foot?

The data for 'Scenic Driving' indicates that building roads attracts cars. I question whether this is true granted the many miles of road already available in the National Forest and elsewhere. However, if it is true, the Alternative 2 should be adopted for energy conservation reasons. Mere driving of automobiles as a recreational activity should be discouraged.

p. 104 3.- What is going to happen to old growth-dependent species?

p.104 4. How is this to be achieved if you can't keep N 90 out of Alec Creek?

p. 107 footnote This is puzzling since nothing in that Alternative (number one) is presently shown as wilderness. The identity of the various Alternatives is confused apparently.

Mr. Spencer T. Ware
Gifford Pinchot Wilderness Area
Barstow, Wash. 98660

Dear Mr. Ware

The comments below are provided for you in changing the direction of work in the Deer Creek Planning Unit as it proceeds from draft to final EIS stage. Please understand that while many comments are written of the report, they don't reflect on you personally since much of the Deer Creek work predates your assignment to the Gifford Pinchot. We would appreciate an opportunity to discuss these comments with you after you have reviewed them so as to clear up any matters which might limit their usefulness in improving best protection and planning for the Deer Creek Planning Unit.

3/30/75

OEC STATIONERY

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TO FOLLOW

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C. 10000

1) Substantial new evidence has recently been published indicating that the volcanic activity of Mt. St. Helens is more important to land use

planning than previously considered. (See attached article SCIENCE 7/1/75).

Your planning and FEIS should incorporate conservative management rules consistent with this

information. For example, the residential development at the upper end of Swift Reservoir should perhaps be discouraged by the NSF because of the work on water flow potential. Your study of the water right will include analysis of management for other resource areas (i.e. Mammoth area, Hawaii).

2) Your DEIS contains a lot of technical verbiage but unnecessarily neglects the three biggest public issues on the Gifford Pinchot over the past several years - HORSE POLICY, WATERBIRKE POLICY and SNOWMOBILE POLICY. The water plan and FEIS should contain details of policy

implementation in these three areas. Your board will be looking on them and it is not necessary to expand on it here.

3) In other areas, the DEIS does not reveal all existing plans or current status of the land. Information on roads at least as detailed as the current "premium map" should be included; the "premium map" information on timber sale, cut and regeneration should be included. The fire year timber "action plan" should be included so we can survive where roads are planned. The recently adopted regional fish protection policy should be referenced and implementation plans proposed in detail.

4) The summary of the DEIS should indicate that this proposed plan covers only a 10-year time frame. It should indicate what options are to be kept for management plans in following decades.

4

5) In the Summary sheet, Section II, you state that "this plan would have a negligible change" on social and on economic conditions of the area. and yet 15 typed lines later you indicate that the "no change from the present" option was not adopted. In view of changed timber harvest amounts and development of entirely new areas, we suggest that the "negligible change" statement is wrong and should be revised. From our viewpoint, one of the most important social characteristics of the regional area is the present existence of large unroaded areas useful for escape from urban pressures. The development of present roadless areas diminishes this not only for 10 years but for generations.

6) A social issue not mentioned in the DEIS is the loss of SASSQUATCH habitat. Whether this is a problem, folklore or undiscovered scientific matter, we don't know - we do think it

5

is worthy of consideration since it currently affects people outdoors (either they go to look for it or stay at home in fear of it).

7) The integration of the Deer Creek Plan into a forest or regional plan is not substantially improved. We have previously suggested a "connection" policy for forest lands between major outdoor recreation areas; the zones protected for such use should be identified in the plan as such.

8) The distribution to federal agencies lacks the USFS (see voluminous paper referred in Comment 1), the NOAA (Land Seeding) has been proposed for this area) and the National Water Quality Commission which in the past years has made important recommendations on reducing sediment in forest streams.

1) The definition of planning with boundaries has been a matter of concern to us for several years. We believe that from a resource boundary viewpoint, the present boundaries are artificial and determine to satisfactory development. In the past, a Quanta Tech address was been incorporated which includes part of the present Quanta Tech with. Your plan and FEIS should indicate that the present condition of land comprising a large part of the Quanta Tech site is inherently suited for woodlands over use.

2) A detailed forest analysis of timber resource plan is included in the DEIS but the corresponding analysis for recreational development / environment controls is not presented. We know, of course, this comes to the USFS as annual appropriation. We believe the plan and FEIS should recognize this financing as an inappropriate way to protect and manage these aspects of national

forests. At best, it doesn't show for long term capital planning - in practice it implies that the timber aspects of your land use plan will go forward much faster and more regularly than the environmental aspects of the plan.

3) A general public problem in reviewing a DEIS such as Quanta Tech is the lack of reference to more detailed information on many aspects of the plan. We suggest that the plan and FEIS include reference to the studies, subject files and maps which support the plan.

4) Although the introduction, page 2, states that a "desirable balance" is sought in the plan, the objectivity of the preparing and approval agency is questioned. The process description in the plan and FEIS should include a specifically reference the information, the objectivity of USFS personnel preparing land use plans.

2

is referenced. We believe that alternatives to provide those exist which provide the "pointing of permits for its extraction" (i.e. Rock Well case in Deschutes National Forest). Indicate the Muddy Hydroelectric Project impact on the Cedar Falls watershed resource area and winter game habitat.

15) In the discussion of non-USFS uses, the suitability of the area for municipal water supply or transmission line siting should be discussed and these uses precluded during the term of the management plan.

16) The existence of Wright and Spencer warblers and the threats to their existence should be discussed (page 11).

17) The discussion of livestock range might well mention the old fencing along the trail enroute to Bear Lake (T9N, R7E, Section 25) and consider its removal as improvement of wildlife habitat.

13) Due to the difficulty of defining in words terms such as "partial restoration and visual management", we suggest the use of photographs to show acceptable and unacceptable practices under the plan. We think, for example, of the waterfalls in a desert but not of road N92 (R6E, T9N, Section 29) as an unacceptable example. Another graphic example of unacceptable practice (or land use) is the sedimentation at the lower edge of a desert off road 923 (R7E, T9N, Section 3) near Wright Meadow. The extent of compensating restoration for such past wrongs should be considered and defined in the plan, not FEIS (some as "affirmative action" in civil rights cases).

14) The DEIS should have included ~~data~~ or referenced an evaluation of the possible adverse application near Water Lake. The water and land of present administrative controls to prevent such intrusion (and also Muddy Hydroelectric Project) should be discussed.

(18) The dimension of undeveloped area (page 13) should consistently define the term. We note ~~that~~ using the word "setbacks" shown on page 4 (Spencer Estate Park), there is considerably more undeveloped area in the planning unit than presently recognized by the USFS. We suggest ~~that~~ calculation of undeveloped area in this sense should be reported in the plan and F&IS.

(19) We object to the casual rejection of wordless men as new "Idleness Study Icons" because of their "long-narrow shape." We have pointed out for years ~~that~~ their shape is arbitrary and they could be word perfectly round by inclusion of wordless men with wordless men such as the USFS.

2c) We suspect that an additional
area of open (unroaded) ~~forest~~ scenic
beauty be protected under BLM Order
#1. This is the entire canyon of
Clearwater and Bear Creeks extending
1.5 miles upstream and downstream from

(18) The distinction of undeveloped area (page 13) then junction

21) Erosion is apparently not in the Glen
Vale planning unit. It should be since
its management is consistent with
the Shore Road protected area. The
major point of access is via the
Glen Vale planning unit.

2) We believe the FEIS could be shortened by
limiting the 6 pages of ~~fact~~ describing
the regional social and economic
setting. A simple reference to other
documents (over 2000) would suffice.
If inclusion is absolutely necessary,
we suggest ~~that~~ serious discussion
be included on limitations of growth
in the WFS "economic base" sense as
shown by the trend of much
national and state regulation
and regulatory activity over the
past several years. For example, the
bill sets of urban sprawl (with all
its imply basically WOOD houses) should
be enforced.

23) We suggest that the FEIS include an analysis of land use and respect for natural land values at areas in the Deer Creek planning unit heavily used for all hunting. Our experience has been one of ORV site destruction, stream bank and miscellaneous damage to the growing timber crop in these areas. We consider that such a study would conclude that additional hunter control is necessary to allow sustained use.

24) The dimension of roads and trails (p. 17) should not only indicate how many miles of trail are found on the unit but also what condition these trails are maintained at.

25) We believe that the FEIS should discuss detailed assumptions about the long economic future which may be predictable. For example, we note that a great deal of the current local economic benefit from timber sales is in road construction. When

the road is under a sustained yield and fully stocked condition, the road construction unit is longer be required (although some winters on the larger road system will be a requisite to harvest). We think that if stability is a goal, the plan should call for an immediate slow-down in new road construction. This provision should be worked into a new alternative for the FEIS.

26) A soil map should be referenced or provided which discloses the prime soils. Photographs of prime soil problems should replace the "general" photos of the area such as on the cover.

27) How are road users distributed in timber management for the planning unit? If a road network, 200' width of land from timber production then 133' width of road on the planning unit takes out over 3300 acres from production. Alternative #1 proposes an additional 100' width of

roots in the planning unit. Based on loss of 6000 acres in a 76000 acre planning unit appears unacceptable. What is the regeneration potential of the land which constitutes these 233 miles of roads?

29) Alternative #1 is described in 30 pages of the DELS. However are objectives and measurable criteria given for determination of management success. We believe the plan and F&E's should provide measurable parameters which allow (at some date into the plan) a determination whether all or part of the plan is being implemented. For example, a note that "soil considerations are paramount to all management activities" is meaningless without objective criteria. Better would be: A survey of soil conditions will be conducted and documented by a soil scientist before planning is completed for each timber sale or road construction (or composite development) job. Sediment traps with

be used upstream and downstream on the smallest flowing stream associated with each project. At the appropriate times during and after project completion, the sediment traps will be analyzed and ~~the~~ an independent soil scientist will evaluate the project effect on soil loss and stream sedimentation. Protective measures for the soil will be included in all timber sales based on general knowledge and specific survey data. As a management goal, mens activities shall not cause soil depletion at a rate 5% above natural soil depletion based on planning unit reference measurements.

29) The averages provided at the top of page 30 do not add to the indicated sum. Please clarify any land use overlaps so that the entire planning unit is considered.

33) The discussion of fire on page 45 should indicate that full roading should occur by more people who start more fire than if the area were unroaded. It is not certain by any means that the road, log, recreation plan proposed is better for fire reduction overall than, for example, the wilderness option. Thus, it should not be listed as a "formable environmental effect."

34) On page 47, economic data is presented regarding planning with the public. One item is "Return to the Federal Treasury." We believe that the management cost of the USFS for the planning with (appropriate funds) should be identified and subtracted from this sum. Do for each alternative.

35) The water impact of Alternative #2 should be less than Alternative #1 since less roads and logging is anticipated (see page 63).

30) The comment at the top of page 31 that "logging will be wintered..." is another example of vague promises which may or may not be kept. More useful would be a commitment to a given level of wintering such as: one trained forest and necessary support personnel (soil, water specialists) shall be at the site during all "working hours of the collection."

31) On page 35, motorized vehicle use should also be prohibited along the Deameter Creek trail, throughout the proposed Shoshone Park area and along the Lewis River trail.

2) On page 41, noise should be recognized as an environmental impact of the proposed action. Mitigating measures to silence chain saws, tractors, etc. should be considered and proposed as part of the plan since noise is incompatible with other (recreational) uses of the area.

36) On page 64, it is stated that water and forage production would be decreased (timber and forage commodities) under Alternative #2. How can forage be reduced (same in Alternative #1) and water production be reduced?

We believe the basic conflict is ^{simultaneous} between timber and recreation use for this area. The economic estimate of recreation value is given. We suggest that rather than add up individual known values, that the USFS conduct a public survey of the region (Wash, Ore., Idaho) and call "Because of recreation value in national forest lands, how much extra pay would you demand if moved to another part of the nation where national forest lands are remote (>1000 mi)?"

37) The fire potential analysis of Alternative #2 doesn't take credit for the long narrow shape of the proposed roadless areas which allow easy access to limit fire spreading. The total numbers of fire starting should

be less than Alternative #1 because of less roading, less logging and less overall people using the area. If you disagree, substantiating data should be referenced.

In summary, we believe the DEIS does not present a reference enough specific rules or data to allow an assessment of the effects of various alternatives. Within the framework of the printed DEIS, we favor Alternative #2 but believe that Alternative #1, if modified and detailed considering road, would allow timber utilization and protection of future management options which we see as necessary.

Sincerely,

L. Williams
Exec. Director

the proposed areas and acreages for each classification in the whole of Gifford Pinchot National Forest.

Since some of the actions described in the environmental report may conflict with the programs and objectives of the U.S. Fish and Wildlife Service, this letter should not be considered as condonance of the actions described in this document. Rather, this letter should be regarded as relating only to the adequacy of the Environmental Impact Statement as a full disclosure document.

Thank you for the opportunity to review this Environmental Impact Statement.

Sincerely,

J. Norvell Brown

J. Norvell Brown
Field Supervisor



United States Department of the Interior

FISH AND WILDLIFE SERVICE

~~BUREAU OF SPORTS AND FISHERIES~~

Reference: RBS

River Basin Studies

P.O. Box 1487

Olympia, Washington 98507

February 11, 1975

" U N O F F I C I A L " INPUT

Mr. Spencer T. Moore

Forest Supervisor

Gifford Pinchot National Forest

500 West 12th Street

Vancouver, Washington 98660

Dear Mr. Moore:

... will receive from their W.O.
at a later date... per telecon 2/19

This responds to your letter of January 29, 1975 requesting our review and comment on the draft Environmental Impact Statement for the Clear Creek Planning Unit, Gifford Pinchot National Forest, Washington. These comments are the official comments of the U.S. Fish and Wildlife Service, but not necessarily of the Department of the Interior under NEPA (P.L. 91-190).

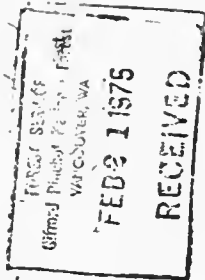
Page 49, 1st paragraph. It is stated that harvested areas will provide good habitat for various species of wildlife by providing grasses, low brush, berries and similar vegetation for several years. This statement conflicts with the statement on Page 52, last paragraph, that refers to herbicide spraying projects to combat brush encroachment on recently harvested areas.

Page 49, paragraph 3. Reference is made to the loss of snags and dead trees necessary for arboreal species of wildlife. We suggest provisions be made to mark and save these trees where feasible.

Page 49, last paragraph. It is stated that logging slash left on the ground provides good cover and protection for many small birds and mammals. This conflicts with the statement on Page 53, 1st paragraph, that suggests logging slash and debris must be burned or removed because it is a fire hazard.

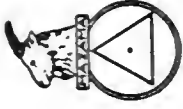
Page 54, Wildlife. Possible adverse effects to wildlife from the use of herbicides should be discussed in this section.

It is difficult to assess if adequate areas have been assigned to various uses such as wildlife management, wilderness, etc., when the EIS covers only a small area of the total National Forest. It would be extremely helpful to reviewers if a table or short section were included which lists



MAZAMAS

909 N.W. 19TH AVENUE
PORTLAND, OREGON 97209



March 29, 1975

Mt. Spencer T. Moore
Forest Supervisor

Gifford Pinchot National Forest

500 W. 12th St.

Vancouver, Washington 98660

Re: Clear Creek DES

Dear Mr. Moore:

We commend the Gifford Pinchot National Forest for the thorough work that went into the preparation of this Statement. We basically agree with the selection of Alternative No. 1 as the way to go in managing this area. We have a few comments and suggestions on details of this plan:

1. Shark Rock Area. We would suggest that this area be slightly enlarged on the west to include the area shown in solid blue and keyed as Critical Soils, unproductive and non-forest land on the map on Page 29. This addition would provide a little more depth to the very narrow area.
2. Trails. The idea of additional trails in this area is excellent as many of the additional miles will be at a low elevation and useable over more of the year. We would like to comment on specific trails:
 - a. Lewis River. This trail should be managed to maintain its natural character. It is suitable for hiker and horse use. To upgrade it so that motorized vehicles could be used on it would seriously decrease the area in as much as the trail would have to be built as a light-duty road to keep machines from completely cutting up the trail. In addition, no logging should be done between the trail and the river; and also, any logging roads constructed near this trail, or providing easier access to it along the way, should be closed to all motorized use.

THE MAZAMAS were organized on the summit of Mount Hood, in 1894. — The purposes of the club are to explore mountains, to disseminate authoritative and accurate information about mountains, and to encourage the preservation of forests and other features of mountain scenery in their natural state. — A person who has climbed to the summit of a snowpeak or which there is at least one living glacier, and the top of which can not be reached by any other means than on foot, is eligible to membership. — The word "Mazama" is derived from the name of a mountain god.

Mazama

2

b. Clear Creek. Building a trail up this creek valley from the Muddy River to the Boundary Trail. The corridor seems a little narrow in the upper zone; but, if logging roads that approach this trail are closed after the logging, this could be OK. We agree that motorized use should be prohibited on this trail system.

c. Clearwater Creek. This trail should be a foot trail, at least as far as the Falls, the idea being to keep Clearwater Campground a quiet campground.

d. Boundary Trail. The part of the trail open to motor bikes should be closed to their use on the trail as they are chewing it up and making a trough out of some of the steeper parts; they are cutting across the switchbacks east of Shark Rock, also.

e. Tie Trails. This is not now in your plan, but we feel it should be. Our proposal is to tie the lower ends of the Clearwater Trail and the Clear Creek Trail by connecting them along the Muddy River and joining them with an extended Lewis River Trail, which would follow the Lewis River down to the head of Swift Reservoir. This would improve trail access for the public and would offer the possibilities of loop trips. These foot trails would be in areas primarily used for logging, so scenic standards could be different. A properly regenerated clear cut can be very nice to hike through or alongside of.

3. Horses. The use of horses concentrated in a small area could cause damage to the recreation resource.

Hiker use and horse use of the same trails are compatible if the trails are safe for the use of both, if either use is not heavy, and, in case of overnight use, if separate camps are available and used.

4. Motor bikes and similar machines. We feel that motorized vehicles do not belong on most of the trails in this unit (present and proposed). The punice base of a good lot of the unit does not make trails that will stand up to the digging action of a powered wheel, particularly on slopes. There are two to three times as many miles of road in the unit, some of them quite remote, which could be used by the machine. Trails to be used by motor bikes should be constructed to a much higher standard, with a heavy gravel base and no sharp switchbacks and steep grades.

5. Camps. We feel there is a need for a few small roadside camps of three or four sites, with water from a creek and one outhouse. Wright Creek and Elk Creek could be possibilities. These would help fire control as the location of campers could be better

controlled. Also, there is a need for a few primitive camps along the present and proposed trails. These should be a short distance off the trail with a sign directing people to them. A fire ring is about all that is required. The Lewis River Trail could use a few not, as backpacking use is increasing along this trail.

6. House Rock. This old emergency look-out is an excellent view point, and restoring the old trail to it would provide a short trip to a good view point. The trail to it could be restored down to the proposed tie trail, suggested above; this would then make a nice trip from Swift Reservoir. Again, because this is a logging area, the scenic standards could include logging.

7. Logging Roads. Consideration should be given to closing timber haul spur roads to public motorized travel, particularly near trails.

8. Wildlife. We appreciate the Forest Service's concern for the winter range for deer and elk and for the elk calving area.

9. Muddy Project Power Withdrawal. We take exception to the proposed Forest Service action of not asking for abandonment of the withdrawal. We feel that the Forest Service should actively pursue with the Federal Power Commission the abandonment of this withdrawal.

We do approve of the Forest Service plan to proceed with their management of this unit as if the Muddy Project is not going to be built.

Thank you for giving us this opportunity to comment.

Sincerely,

Eleanor Heller

Eleanor Heller
Chairman, Conservation Committee

cc:
District Ranger

14231 S. E. Ellis St.
Portland, Oregon 97236
March 29, 1975

Mr. Spencer T. Moore
Forest Supervisor
Gifford Pinchot National Forest
500 W. 12th St.
Vancouver, Washington 98660

Dear Mr. Moore:

The GPNF proposal for management of the Clear Creek Planning Unit is excellent; it is a good mix of land uses. Especially commendable is the plan for new and existing trails to fit into not only the roadless areas but streamside trail corridors in timber management areas. Standards for these trails could vary according to their location and expected use.

My personal comments will be from the point of view of a hiker or a potential hiker, especially as automobile transportation costs increase. Assuming that people will drive less often to this area, because of increased expense, they will tend to stay longer, that is, make less day trips and stay two or more days, instead.

People staying in the summer home area and the campground at Swift Reservoir probably will be hiking more and using the cars less. A trail head in this area, with a tie trail system leading into the proposed Clear Creek Planning Unit trail system, would entice people onto hiking trails instead of into their automobiles.

Campers at Clearwater Campground will use their cars less if trail heads are provided at the campground, so they can day hike or stroll out of the campground up Clearwater Creek to Paradise Falls and down Muddy River.

Since no car campgrounds are planned near or at trailheads of the Clear Creek, Lewis River, and Boundary Trails, these trails will be used mostly by backpackers who will camp along the trails. Driving distances from the metropolitan area and increasing cost of gasoline will tend to discourage one-day trips and day-hike use of these trails. Heaviest impact from trail camping will be along the first few miles of these trails, so trail camp sites must be identified. These sites should be off the main trail and away from the streams to prevent destruction of the attractive trailside environment.

8600 S.W. Fair Oaks Way
Portland, Oregon 97225
March 29, 1975

Spencer T. Moore
Supervisor, Gifford Pinchot N.F.
500 W. 12th St.
Vancouver, Wa 98660

Subject: Clear Creek Planning Unit DES

Dear Sir:

As a user of the trails and berry fields in this unit I feel that you and your staff have done an excellent job in preparing this Draft Environmental Statement.

I agree with your conclusions that Alternative number 1 is the way to go tho I have a few suggested changes:

1. The first change would be to try to make the Shark Rock Area a little bigger since that area is still quite narrow even with the additions you propose. I would suggest that some of the high elevation area in the upper reaches of Clear Creek be added. The tree in that area take a very long time to re-grow and even 140 year rotation might not be long enough. My thinking is that the overall return to the people would be better in the long run as recreation. The map on page 29 shows some critical soils, unproductive and non-forest land directly to the west of the proposed boundary and this seems like it could be included as well as some of the land between the area to make the total Shark Rock Area larger.

2. Re trails, I would suggest that the Lewis River trail be left basically as it is a foot trail. To "improve" it so motor driven machines could use it would destroy the qualities that make it such a nice trail. The machines can use the road on the other side of the river. Also any logging spur roads that come close to the trail should be closed to public travel at all times so as to maintain the remoteness this trail now offers in a relatively wooded area.

The proposed trails up Clear Creek and Clearwater Creek sound very good and here again these should be foot trails, the machines banned. I wish the unroaded corridor along the upper part of Clear Creek was wider but if the spur logging roads that come close to the trail were kept closed to the public, that would accomplish the purpose. Re the Boundary trail, that need to be closed to motore bikes now. The damage that is now occurring along that trail from the hill climbing crowd is pretty bad to see ie the East side of Shark Rock.

Also I would suggest that consideration be given to connecting the Clearwater and Clear Creek trails with a trail along the Muddy River leading on down to the Lewis River and the head of Swift Res. Also the Lewis River Trail should be extended down river to join in. This would allow loop trips and also trail trips directly from the upper end of Swift Res. Since this is full logging area, senic standard could be a little lower and anyway a well stocked clearcut is very nice to hike through.

Trail standards should reflect the expected type of use:

Lower Lewis River Tie Trail system (as proposed by the Mazamas) and lower Clearwater Trail:

Trail construction standards that provide safety for the casual hiker in street shoes.

Bridges, preferably rustic, acceptable; good foot logs with railing, desirable.

Punchoon in areas that can't be drained.

Road access points acceptable and to a certain extent desirable.

A House Rock Trail (reconstruction proposed by Mazamas.):

Standards similar to above but steeper and narrower to accomodate a more purposeful hiker.

Proposed Clear Creek Trail, existing and/upstream extension of Lewis River Trail, and Boundary Trail:

Narrow, low-impact trail that is suitable for backpacker and boot hiker, with opportunity for some adventure. Winding trail that is located to take advantage of scenic values.

Bridges not acceptable in this setting; foot logs provided where needed.

Road access only at existing or planned trail heads.

From the viewpoint of either the day hiker or the backpacker, motorized use of the same trail as hikers is not acceptable; in fact, motorized use destroys what the hiker came for as well as the trail itself. Motorized use should be permitted only on roads or on selected trails constructed or reconstructed to the standards of one track of a primitive all-weather road.

Thank you for proposing a well-thought-out management plan.

Sincerely,

Spencer Heller

Spencer Heller

Clear Creek DES continued

3. I feel a stronger stand need to be made relative to motor bikes. Since there are two to three times as many miles of roads as existing and proposed trails, motor bikes etc should be kept of the trails. A lot of these roads are quite remote and little traveled which should meet their needs. To build a trail to with stand the abuse of the powered wheel is going to make the trail much more expensive to build because a rock base is required like half a logging road. To keep the machine on the existing road.
4. I wonder if you overlooked the old emergency Lookout on House Rock. It is an excellent vista point and if the old trail was restored and extended down to the tie in trail proposed above, it would make a nice one day expedition from Swilft Res. I visit it once of twice a year and feel it would be worth redeveloping. Again this is logging area and the senic standards could include the clear cuts.
5. Muddy Project power withdrawal should be abandoned. I would recommend that the Forest Service request from the Fed Power Comm. that this withdraw be abandoned

Very truly yours,

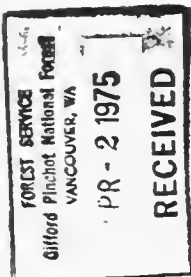
Bob Powne

TSUBV	
DLP FS	
AO	
TM	
FIRE	
R&L	Moore
ENG	Spencer T.
I&E	Forest Supervisor
B&E	
CONTR	Clifford Pinchot National Forest
PERSON	West 12th Street
MD	Washington 98660
TEAM	
SERVICES	
	Dear Mr. Moore:
	First let me say that I was dismayed at your response to my request for a brochure or copy of the Draft Environmental Impact Statement on the Clear Creek Planning Unit. Apparently there were no more copies available because the National Forest was economizing. Considering the lack of trust in all levels of government, lately, public information seems a poor place to start economizing.
	I was forced to seek out a copy in a public library. This entailed considerable inconvenience and resulted in an inadequate study of the E.I.S. The following are my comments on some of the issues raised in your draft statement:
	Fire- Your treatment of fire left me bewildered. On the one hand you depicted fire as a positive force in slash removal, etc. On the other hand you stated that every effort to eliminate fires in natural areas (Scenic, etc.) would be taken. This is despite your statement that small fires remove much of the underbrush that provides much of the fuel for large catastrophic fires. In addition you mentioned that fire was the major natural process for creating open areas and meadows, which are valuable wildlife habitats. Apparently you feel that the only valuable open area is one that is created by timber harvesting.
	Silviculture- No mention was given to the fact that single specie, even aged forests are more susceptible to epidemics of disease and insects because they spread so fast through the same type of tree. Also no mention of the increased use of pesticides and petroleum based fertilizers needed; nothing about encouraging more efficient use of slash by harvesters; also single species forests limit the number and variety of ecological niches for wildlife.
	Lewis River - logging and roads allowed in this supposedly protected corridor. Not much different than in timber management areas; needs better definition and tighter controls; ambiguity and subjectivity provide no real protection in your draft statement.

10024 M.E. 13th

Bellevue, Washington 98004

March 28, 1975



Shark Rock Scenic Area- This gives minimal protection. Cutting timber in this area is allowed for a variety of reasons. The most ludicrous of them is to provide 'scenic views'. We have enough areas where timber harvesting has provided us with 'scenic views'. The view is usually of a clearcut across the valley. No mention is given to the associated damage to the land around a harvesting operation (of any kind) in a supposedly scenic area. The shape of the area also encourages harvesting. For the long arms of the Scenic Area provide a large amount of interface between natural areas and timber management areas, and a short distance from the center of the natural areas to the adjoining harvest areas. This makes the control of fire, disease and insects (and the inevitable timber salvage operations) all the more appealing rather than allowing a natural process to prevail. With these loopholes, wilderness designation seems the only alternative for keeping the area natural and scenic.

Buffers- What is an "adequate" buffer around lakes, marshes and meadows? This needs better definition.

Snags- You admit that snags and dead tops are important to many species of animals and that harvesting and development will probably result in a decline of these species. (The disappearance of the Western Bluebird from western Washington is probably attributable to this, as much as anything else.) Yet you have given no alternative but to cut them down and so the only remaining populations would be confined to the Scenic and Wildlife Management Areas.

Then you say that harvesting and salvage operations are allowed in these areas, which will, of course, remove these dead or diseased trees so they won't be "wasted" or become a hazard. Snags and even windthrows have a valuable place in the ecosystem and a concerted effort to retain them should be instituted.

Roads- No discussion of closing any existing roads; only the option of building new ones. Roads 1190 could be closed at the Lewis River crossing, and 920 & 923 in the Spencer peak-Wright Meadow area.


Economics- Monetary figures only given for the timber industry; no figures on other uses that provide income for the local area and region.

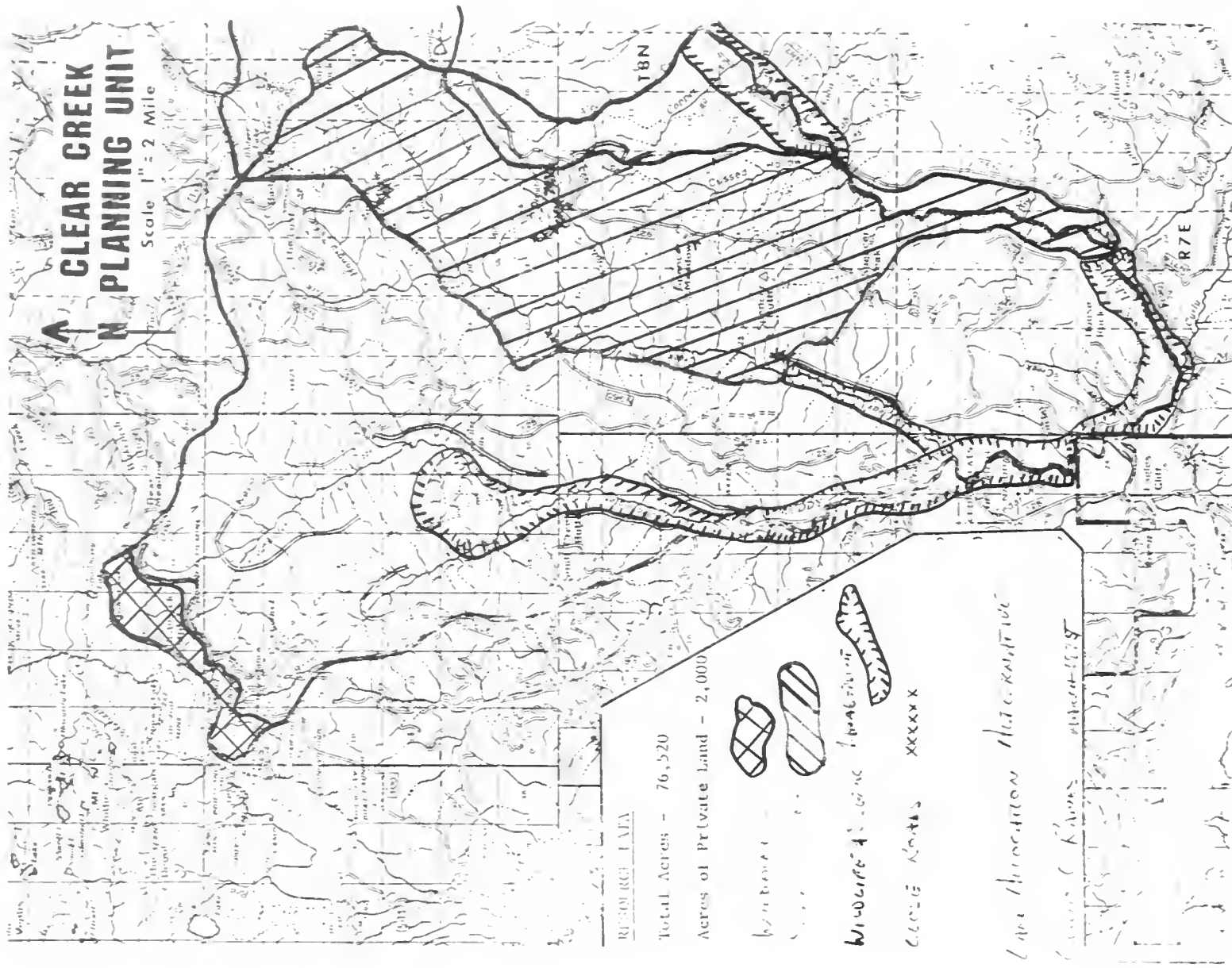
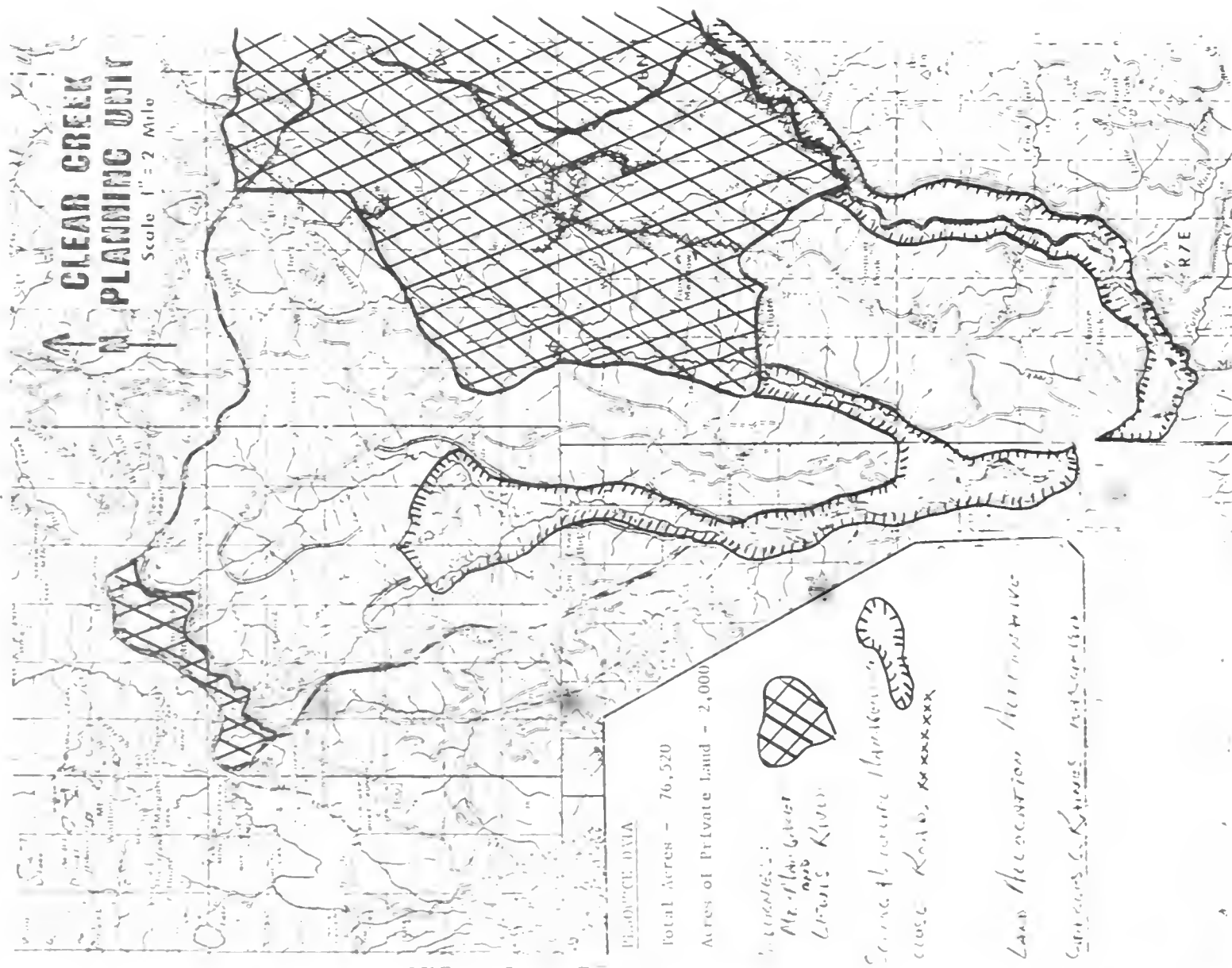
Alternatives- I found little change in your proposal from your recommendation of two years ago. Apparently no attempt was made to modify the proposal or combine it with the better features of the other alternatives. The resource

data provided was very broad and general. Since the economics of timber harvesting seems to be of prime importance here, a map of the timber producing potential of the area would be quite helpful (see the Okanogan Land Use Planning Study brochure). There were few proposals for mitigating adverse environmental impacts (e.g. snags) in the draft statement. Your consideration of Wilderness was rather cursory and the Wilderness Quality Index was so subjective as to be almost worthless.

Enclosed are a couple of other alternatives for managing this area.

Sincerely,


Charles C. Raines





Gifford Pinchot Study Group

P. O. Box 633

Longview, Washington 98632

February 25, 1975

✓	SUPV
	DEP FS
	AO
	TM
	FIRE
	R&L
	ENG
	I&E
	B&F
	CONTR
	PERS
	MD TEAM
	SERVICES
	Williams

Spencer Moore

Forest Supervisor

Gifford Pinchot National Forest

500 West 12th Street

Vancouver, Washington 98660

Dear Mr. Moore:

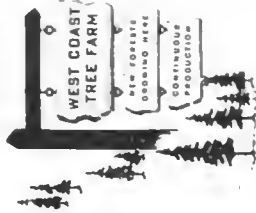
We would like to go on record supporting the Forest Service recommended Alternative Number 1. Number 5 is totally unacceptable. Number 2 has too much wilderness set aside in areas of not high enough quality. Number 3 has some attractive points, but overall, Number 1 seems to be the superior choice.

Specifically, we would like to make the following comments and additions:

1. We would like to see the Lewis River Trail area be given an unroaded classification. Continuing the trail up the river as you project would be strongly supported by us.
2. We support strongly the construction of the Clearwater Creek Trail.
3. We have a continuing concern for the Blue Lake Trail, number 3. The trail is already too short and abused. We urge stronger protection for this trail. Any logging across this trail or roads and/or clearcuts next to this trail or lake is a cause for us.

Overall, we commend the Forest Service for a well-thought out alternative.

Tim Moore



INDUSTRIAL FORESTRY ASSOCIATION

SERVING FOREST OWNERS, LOGGERS, WOOD USERS
THROUGHOUT THE DOUGLAS FIR REGION

1220 S.W. COLUMBIA STREET
PORTLAND, OREGON 97201

Telephone:
(503) 222-9505

March 31, 1975

Mr. S. T. Moore, Supervisor
Gifford Pinchot National Forest
500 W. 12th Street
Vancouver, WA 98660

Dear Mr. Moore: Clear Creek Planning Unit
Draft Environmental Impact Statement

We are taking this opportunity to respond to the above subject for IFA's 116 members in Western Washington and Western Oregon. All are a part of the forest products industry and vitally concerned with the constant eroding of the commercial forest land base in Region Six.

We do not support your proposed action as stated in the Draft EIS. The National Forests must establish national and regional goals, to at least maintain or increase current allowable harvests. Planning units, such as Clear Creek, must clearly state these goals as an objective of the planning unit. Your statement does not clearly relate to any goals for timber production as related to other planning units throughout Region Six, or even the Gifford Pinchot National Forest.

Your final statement should not only speak to the environmental and economic impact of that proposed action, but it should also relate to the fall-down from potential yields due to changes in land base and multiple use proration. This, also, is an environmental impact. A system of accumulative accountability should be initiated so that future planning units would show the contribution and fall-down of allowable harvest volumes for the forest level and the Columbia-Willamette area of each planning unit. Allocation of resources must be made more simple and clear to forest users.

We do not believe that allowable harvest reductions for visual management constraints in partial retention and retention areas are justified at this time. Better information is needed to make this determination and could better be determined on the ground as a part of project planning. Discussion with your staff indicated an error in the visual management proration for the planning unit. We hope the volume will be correct for the final statement.



Mr. S. T. Moore
March 31, 1975
Page - 2 -

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT
ARCADE PLAZA BUILDING, 1321 SECOND AVENUE
SEATTLE, WASHINGTON 98101

March 31, 1975

REGION X

The Forest Service will continue to polarize forest users until there is an indication that the Forest Service is responding to objectives to meet recreation, timber and water needs for a growing population. We support your alternative 4, which maximizes timber production, with the provision that you manage the Clear Creek Planning Unit for potential yield.

Until we can understand what the Forest Service contribution will be to help maintain a timber supply, we are forced to maintain an extreme position. To date, all the planning units we have been involved with in Region Six call for a reduction in annual harvests.

Finally, we would like to say that the Clear Creek statement is a vast improvement over some of the others we have seen. Consideration of the items we mentioned will help improve it, and we are willing to work with your staff toward this end.

Sincerely,

Philo Gregg
District Forester

PG:jo
cc: Gifford Pinchot National Forest
Timber Purchasers Committee

Mr. Spencer T. Moore
Forest Supervisor
United States Department of Agriculture
Forest Service
Gifford Pinchot National Forest
500 West 12th Street
Vancouver, Washington 98660

Dear Mr. Moore:

Subject: Draft Environmental Statement
Clear Creek Planning Unit
Gifford Pinchot National Forest

We have reviewed the statement submitted with your January 29, 1975 letter requesting comments by March 31, 1975.

The proposed action is the implementation of a comprehensive management plan for the Clear Creek Planning Unit located in Skamania County in the state of Washington.

Our review does not indicate any significant impact in our areas of concern. Thus we find no objection to your proposed management plan.

Thanks for the opportunity to comment.

Sincerely,

James L. Young
Regional Administrator

IN REPLY REFER TO:

10D

Spencer Moore, Supervisor
G.P. Nat'l Forest, Vancouver, Wash.

April 2, 1975

bad thing. Mother Nature has seen to it that the very area we are talking about has been burned over time and time again, and no proof has ever been given to our knowledge that wood smoke is actually harmful to the overall composition of the atmosphere.

With the above points in mind, we believe the best choice would be Alternative #4 with #1 being the next choice, keeping in mind that we should insure the maximum community benefit, preservation of fish and game habitat, air and water quality, and protection of the soil by the following:

1. Harvested areas to be replanted immediately.
2. Road construction and logging to be done in a manner to minimize erosion and stream siltation.
3. Open old trails and build a more extensive system for hiking and horseback riding.
4. Allow motorbikes and snowmobiles on all roads and certain designated trails.
5. Situate campsites away from fragile areas.
6. Supply adequate sanitary facilities and depositories for solid waste.
7. Be sure that regulations for fire control, sanitation and waste disposal are enforced.
8. Conduct logging operations and methods employed with economics in view at all times, minimizing the use of helicopters, balloons and skylines until they prove more economically feasible, or on areas where conventional methods are absolutely unable to do the job.

We realize that funding to perform special functions in the National Forest, such as trail-building, campgrounds, reforestation and other activities for public use, is by Congressional appropriation, and we will be most happy to lend our support to help you secure the proper funding to insure the productivity and recreational values are maintained forever.

Sincerely yours,

BOARD OF COUNTY COMMISSIONERS
LEWIS COUNTY WASHINGTON

Chairman

Member

Member



OFFICE OF THE COMMISSIONERS
LEWIS COUNTY, WASHINGTON
CHEHALIS, WASHINGTON
98532

(206) 748-0026

HANLEY HILPERT
FIRST DISTRICT

R. A. (BOB) JACOBSEN
SECOND DISTRICT

HAROLD COOPER
THIRD DISTRICT

Spencer Moore, Supervisor
Gifford Pinchot National Forest
500 West 12th Street
Vancouver, Washington 98660

Dear Sir:

The Lewis County Commissioners would like to offer the following comments in regard to the Draft Environmental Statement for the Clear Creek Planning Unit of the Gifford Pinchot National Forest.

Alternative #1, while nearly furnishing the optimum use of the area, provides less visitor days of recreation than does #4, due mainly to the unroaded areas in the Spencer Butte section and around Meta, Ghost and St. Charles Lakes. In conjunction with this philosophy it also reduces the allowable annual timber cut, reduces the overall employment figures and increases the risk of uncontrolled fires. Too much emphasis is being placed on concentrating the overmature stands of timber. These are the very stands we should concentrate on removing in order to eliminate the fire potential and get a new thriving crop growing in their place.

The Clear Creek area is not wilderness type country and should have consideration mainly for people use and job producing capability. Visual resources sound nice, and everyone enjoys seeing large, growing timber, but we feel the majority of the people would also enjoy seeing the rebirth of the area into a beautiful stand of healthy, vigorous young timber with roads available for use in fire control and access for those people who are physically unable to walk, ride horses, motorbikes, etc.

Mention is made many times about leaving dead topped trees and snags for owls, osprey, etc. These birds always have and always will nest and live where there is a food supply, which is in the clearcut and newly planted areas. Young regrowth is what increases the food supply for deer, elk, bear and birds, and more game and birds are available in the Clear Creek area now than there were twenty years ago.

The small amount of water temperature increase in the high mountainous sections of Western Washington due to logging is so minimal as to hardly be worth mentioning. Most streams are far better for fishing when sunlight and young growth on the banks are present. Most game and fish tend to starve out and diminish in large stands of dense timber.

The elk calving areas would hardly present a problem because no major part of the unit will be logged at any one time, keeping in mind that this cutting cycle on the higher elevations will probably be on a 150 to 175 year basis.

Slash burning, while sometimes being objectionable to some people, is not necessarily a

The Wilderness Society • ——— 4260 E. Evans Avenue, Denver, Colorado 80222
Western Regional Office Phone (303) 753-2266

April 1, 1975

Mr. Spencer T. Moore, Supervisor
Gifford Pinchot National Forest
500 West 12th Street
Vancouver, Washington 98660

Dear Mr. Moore:

In response to your draft environmental statement for the Clear Creek Planning Unit, The Wilderness Society would like to go on record in support of Land Use Alternative No. 2.

We feel that watershed protection is of primary importance, and that wilderness designation can best accomplish this goal by eliminating the chances for stream siltation caused by soil erosion, road location, and other developments. Water temperature would remain stable under wilderness classification. Further, we reject the use of any chemicals that would directly or indirectly affect water quality.

The scenic and wildlife habitat values inherent to Spencer Butte should preclude any timber-harvesting activities in that region. We recommend wilderness classification to within 500 feet of the center line of existing roads.

In particular, we urge that you consider wilderness recommendation for the northwest area of the Planning Unit which is contiguous to the National - Margaret-Strawberry Mountain roadless area. Likewise, the northeast corner contiguous to the Shark Rock Scenic Area should receive similar consideration, as proposed in Alternative No. 2.

In the elk-calving area of Elk Creek, The Wilderness Society recommends complete protection of the habitat with no destruction in any season due to logging activities. Such activity would constitute harassment of this species of wildlife.

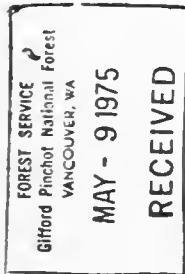
The Wilderness Society feels that wilderness classification as a viable management alternative received inadequate attention in this impact statement. Further, it is our considered opinion that any variation of Alternative No. 2, such as managing the Planning Unit in an unroaded status is no substitute for the Congressional protection that The Wilderness Act provides. Increasing human population and decreasing wildlife and its habitat would dictate a more objective consideration of this means of land-use management.

Sincerely,

Clifton R. Morritt

Clifton R. Morritt
Director of Field Services

"In Wilderness is the Preservation of the World." Thoreau



STATE OF WASHINGTON

OFFICE OF THE GOVERNOR
OFFICE OF PROGRAM PLANNING AND FISCAL MANAGEMENT

HOUSE OFFICE BUILDING
OLYMPIA, WASHINGTON 98504

LEE M. BUFFINGTON
DIRECTOR
206-753-5450

May 2, 1975

✓	SUPV
✓	DEP FS
✓	AO
✓	TM
✓	FIRE
✓	R&L
✓	ENG
✓	I&E
✓	B&F
✓	CONTR
✓	BARBEL J EVANS
✓	MD TEAM
✓	SERVICES

Mr. Spencer T. Moore
Forest Supervisor
Gifford Pinchot National Forest
500 West 12th Street
Vancouver, Washington 98660

Dear Mr. Moore:

Review of the draft environmental impact statement for the Clear Creek Planning Unit has been completed by agencies of the State of Washington. The review process was coordinated by the Office of Program Planning and Fiscal Management, acting in its role as the state clearinghouse.

Comments received from the Department of Ecology, Department of Fisheries, Department of Game, Parks and Recreation Commission, and the Department of Highways are attached for your consideration in preparing the final statement.

Thank you for the opportunity to review the statement. I hope you will find these comments useful in preparing the final statement.

Sincerely,

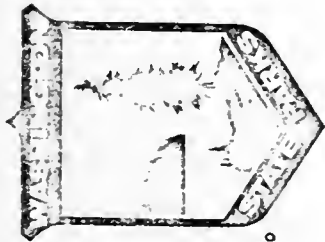
STATE PLANNING DIVISION

Nicholas D. Lewis
Assistant Director

NDL:dc

Attachment

GOVERNOR
DANIEL J. EVANS
COMMISSIONERS:
JEFF D. DOMASKIN
THOMAS C. GARRETT
KAY GREEN
BEN HAYES
RALPH E. MACKAY
EUSTACE VYNNE
WILFRED R. WOODS
DIRECTOR:
CHARLES H. ODEGAARD



WASHINGTON STATE
PARKS & RECREATION COMMISSION

LOCATION: THURSTON AIRINDUSTRIAL CENTER
P. O. BOX 1128
OLYMPIA, WASHINGTON 98504
PHONE 753-5755

February 28, 1975

IN REPLY REFER TO:

TO: Mike Mills, State Planning Division, Office of Program
Planning and Fiscal Management
FROM: David W. Haysler, Chief, Environmental Coordination
David Hansen, Chief of Archaeology and Historic Preservation
RE: DRAFT ENVIRONMENTAL IMPACT STATEMENT - USDA - GIFFORD PINCHOT
NATIONAL FOREST

The Washington State Parks and Recreation Commission has reviewed
the above-noted document and does not wish to make any comment at
this time.

Thank you for the opportunity to review and comment.

dj

March 26, 1975

Office of Program Planning
and Fiscal Management
101 House Office Building
Olympia, Washington 98504

Attn: Mike Mills

Subject: USDA - Gifford Pinchot National Forest

Dear Sir:

The draft environmental impact statement for the Clear Creek Planning
Unit has been received by this department. It is gratifying to note
that the Forest Service has made a coordinated effort to fulfill its
obligations under the National Environmental Policy Act.

Although the Department of Ecology does not have specific comments to
offer at this time, the information contained in your impact statement
will definitely be used in our decision-making process if the Depart-
ment's jurisdiction enters into any aspect of the proposed project in
the future.

Thank you for providing the subject impact statement. Feel free to
contact this office if additional information is needed.

Sincerely,

T. L. Elwell
Environmental Review

TLE:je

CC: Chet Rock

State of
Washington
Department
of Ecology



WASHINGTON STATE
HIGHWAY COMMISSION
DEPARTMENT OF HIGHWAYS

Highway Administration Building
Olympia, Washington 98504 (203) 753-8000



March 19, 1975

Mr. Mike Mills
State Planning Division
Office of Program Planning and
Fiscal Management
106 House Office Building
Olympia, Washington 98504

U. S. Forest Service
Clear Creek Planning Unit
Draft Environmental Statement

Dear Mr. Mills;

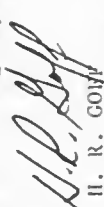
Reference is made to your letter of February 19, requesting our review of the draft environmental statement for the above project.

We have completed our review and find no conflicts with existing or proposed highways in the area.

Thank you for the opportunity to review this information.

Sincerely,

G. H. ANDREWS
Director of Highways

By: 
H. R. GOFF
Assistant Director for
Planning, Research and State Aid

HRG:eh
RA/RBD



Director / Carl N. Gause

Assistant Director / Ralph W. Larson
Ronald N. Anderson

Game Commission

Arthur A. Coffey, Yakima, Chairman
James R. Allen, Tacoma
Elmer G. Gorken, Quincy
Claude Beckin, Natile
Glenn Galbreath, Wellpinit
Frank L. Canady, Jr., Vancouver

DEPARTMENT OF GAME

600 North Capitol Way Olympia, Washington 98504

March 24, 1975

Mr. Mike Mills, State Planning Division
Office of Program Planning and Fiscal Management
House Office Building
Olympia, Washington 98504

Attention: Spencer T. Moore, Department of Agriculture

Dear Mr. Mills:

Your draft environmental impact statement - An Impact Analysis, Clear Creek Planning Unit, Gifford Pinchot National Forest - was reviewed by our staff as requested. Our comments follow.

This impact assessment lays out five separate alternative management plans for Clear Creek Planning Unit segment of Gifford Pinchot National Forest. The environmental impact analysis appropriately centers around the proposed alternative management scheme (Alternative 1). This analysis is general in nature and does not treat adverse impacts in detail. We hope more detailed information will be included in the final draft on adverse impacts which are pointed out in review comments submitted to your agency.

A notable adverse impact of the proposed plan is its removal of all inventoried roadless and undeveloped areas from wilderness status consideration (see page 101). An alternate plan is presented which appears to include many of the features of the proposed plan, while maintaining a wilderness option -- Alternative Plan 2 (pages 58-60). However, adverse environmental effects associated with Alternative 2, are not discussed in a detailed manner. Therefore a firm foundation is not provided on which to base a decision whether Alternatives 1 or 2 would result in least adverse environmental impact while accomplishing major project objectives.

We feel this is unfortunate and suggest the final impact statement include a comparative analysis of the adverse resource impacts associated with Alternatives 1 and 2. This should allow decision makers a greater opportunity to objectively analyze the wilderness question and the trade-offs involved. Special emphasis on comparative human use densities (recreation) and associated impacts would be appreciated. Similarly, the trade-offs involved with the two alternatives with respect to wildlife resource integrity, management efforts, and recreational use (i.e. hunting, passive uses, etc.) would be helpful.



DANIEL J. EVANS
GOVERNOR

ROOM 115, GENERAL ADMINISTRATION BUILDING • PHONE 753-6600
OLYMPIA, WASHINGTON 98504

DONALD W. MOOS
DIRECTOR

March 20, 1975

Mr. Spencer T. Moore
Forest Supervisor
Gifford Pinchot National Forest
500 West 12th Street
Vancouver, Washington 98600

Dear Mr. Moore:

This is in response to your request to review and comment on the Draft Environmental Impact Statement "An Impact Analysis Clear Creek Planning Unit Gifford Pinchot National Forest."

As you correctly stated on page 26, there are no anadromous fish in or near the unit, as they are blocked by Merwin Dam far downstream.

Our department does not have any comment to offer other than no adverse effects are expected on the food fishery resource.

Thank you for the opportunity to review and comment on the Draft Environmental Impact Statement.

Sincerely,

Donald W. Moos
Director

Gene Deschamps, Biologist
Stream Improvement & Hydraulics

DWM:CD:bj

cc: Dept. of Game
Dept. of Ecology
Management & Research/Holland
✓OPP&FV/Nike Mills

Mike Mills

-2-

March 24, 1975

Additional comments on your assessment of adverse effects follow.

Adverse Environmental Effects Which Cannot Be Avoided

Herbicide spraying projects are suggested as a means of combating brush encroachment (Vegetation subsection, pages 52-53). A discussion of the effects which such spraying has on other natural resources (water quality, wildlife, etc.) would be appropriate and is recommended. Similarly a discussion is needed of other methods which could be used to minimize adverse effects while accomplishing the same objective (i.e., tree production).

The attention given stream degradation which results with improper timber harvest, road development and other activity is appreciated. Measures which will be taken to remedy this situation deserve discussion.

You indicated in the "Wildlife" subsection that no detailed wildlife management plan has been made for the Clear Creek Planning Unit. An indication of when this plan will be prepared would be appropriate. In this same section, adverse impacts on wildlife which will be experienced with the proposed plan are discussed in a general way. No specific measures are proposed to mitigate these adverse effects, however. Rather it is stated, "These impacts can be minimized by limiting access and management activities during critical periods." Further specificity in the final statement on the types of mitigation measures which will be taken is recommended. Points which could be covered include modifications in cutting practices, herbicide use, protection of valuable elk habitat, and other measures.

Thank you for sending your statement and providing us an opportunity to comment. We hope our comments will be helpful.

Sincerely,

THE DEPARTMENT OF GAME

Eugene S. Dziedzic, Asst. Chief
Environmental Management Division

ESD:jb
cc: Frank White
Agencies

prospectors. For the romanticist and our youth, eager for adventure, trails born of bygone times possess a value irreplaceable by the newer, better and modernized trails.

We recommend that the Forest Service consider a system whereby Federal, State, and conservation group representatives involved in recreation planning, be given voice in the Forest Service decisions as to the disposition of existing trails. The Federal Bureau of Outdoor Recreation, State Parks and Recreation Commission, the Sierra Club, et al, should be involved in decisions addressing the future of our recreational trails systems on Federal lands. Forest Service decisions spelling the destruction of trails should stand the scrutiny and cross-examination of non-Forest Service agencies responsible for the protection of existing recreation facilities. At present no avenues exist whereby the public can voice their concern over the demise of trails. Although this would not afford the public direct input, it would afford an avenue through which the public's views could be presented on one specific aspect of a "Unit's" ultimate use.

Our comments on this draft statement have been classified L0-1, L0 (Lack of Objections) 1 (Adequate Information). The classification and the date of the Environmental Protection Agency's comments will be published in the Federal Register in accordance with our responsibility to inform the public of our review on proposed Federal actions under Section 309 of the Clean Air Act.

Thank you for the opportunity to comment on this draft statement.

Sincerely,

Walter D. Jaspers

Walter D. Jaspers
Director
Office of Federal Affairs

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION X

1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101



REPLY TO
ATTN OF:

10FA - M/S 623

March 2, 1976

Mr. Spencer T. Moore
Forest Supervisor
U.S. Department of Agriculture
Forest Service
Gifford Pinchot National Forest
500 W. 12th Street
Vancouver, Washington 98660

Dear Mr. Moore:

We have completed review of the draft environmental impact statement, "Clear Creek Planning Unit." Although the statement generally appears adequate and well presented, certain areas lack specificity sufficient to allow the reviewer to evaluate probably adverse impacts.

Information provided addressing present soil, slope and geologic inventory, impacts on the soil resource, and mitigative and preventative measures to be employed are not adequate to allow reviewer evaluation of the ultimate timber harvest and roadbuilding adverse impacts. In addition to the excellent photographs presented, information as to percent of Unit in the various Forest Land Classes which contain e.g. 1) high hazard soil with severe surface erosion potential, 2) slopes > 40, 60, 70% etc., 3) low vegetative productive potential, 4) highly dissected terrain, etc., should be given. Mitigative and preventative measures should be presented in a Management Prescriptions' section sufficiently detailed to assist or give guidance to even the professional forester or the logging contractor. Also included in the Management Prescriptions should be detailed constraints and guidelines for SMU's.

One of the questions which often confronts the reviewer of a Forest Service DEIS is the disposition or impact of a harvest plan on long existing trails within the Unit. Often the trails either become logging road routes or are severely chopped up by clear cuts, and, except for deer and elk hunters for which this effect is ideally suited, the trails no longer afford the recreation value enjoyed by generations of backpackers. To many families using the "Unit" area for recreation, the greatest concern is not the disposition of the timber resource, for they recognize the harvest need, but rather the destruction of a trail. Trails are a significant part of our American heritage, passing thru the centuries from game trails to the routes of Indians, trappers, explorers, and

eager for adventure, trails born of bygone times possess a value irreplaceable by the newer, better and modernized (plastic-disposable) trails leading to the "truly scenic" (and well manicured) "attractions" of the area.

To destroy these trails is to discard our past as so many disposable bottles. We recommend that the Forest Service consider a system whereby Federal, State, and conservation group representatives involved in recreation planning, be given voice in the Forest Service decisions as to the disposition of existing trails. The Federal Bureau of Outdoor Recreation, State Parks and Recreation Commission, the Sierra Club, et al, should be involved in decisions addressing the future of our recreational trails systems on Federal lands. Forest Service decisions spelling the destruction of trails should stand the scrutiny and cross-examination of non-Forest Service agencies responsible for the protection of existing recreation facilities. At present no avenues exist whereby the public can voice their concern over the demise of trails. Although this would not afford the public direct input, it would afford an avenue through which the public's views could be presented on one specific aspect of a "Units" ultimate use.

Our comments on this draft statement have been classified L0-1, L0 (Lack of Objections) 1 (Adequate Information). The classification and the date of the Environmental Protection Agency's comments will be published in the Federal Register in accordance with our responsibility to inform the public of our review on proposed Federal actions under Section 309 of the Clean Air Act.

Thank you for the opportunity to comment on this draft statement.

Sincerely,

Walter D. Jaspers

Walter D. Jaspers
Director
Office of Federal Affairs

U.S. ENVIRONMENTAL PROTECTION AGENCY

REGION X

1200 SIXTH AVENUE
SEATTLE, WASHINGTON 98101



REPLY TO
ATTN OF:

10RA0FA - M/S 623

April 4, 1975

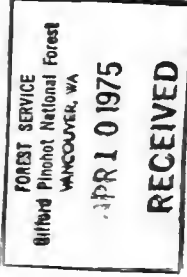
Mr. Spencer T. Moore
Forest Supervisor
U.S.D.A. - Forest Service
Gifford Pinchot National Forest
500 W. 12th Street
Vancouver, Washington 98660

Dear Mr. Moore:

We have completed review of the draft environmental impact statement, "Clear Creek Planning Unit." Although the statement generally appears adequate and well presented, certain areas lack specificity sufficient to allow the reviewer to evaluate probable adverse impacts.

Information provided addressing present soil, slope and geologic inventory, impacts on the soil resource, and mitigative and preventative measures to be employed are not adequate to allow reviewer evaluation of the ultimate timber harvest and roadbuilding adverse impacts. In addition to the excellent photographs presented, information as to percent of Unit in the various Forest Land Classes which contain e.g. 1) high hazard soil with severe surface erosion potential, 2) slopes > 40, 60, 70% etc., 3) low vegetative productive potential, 4) highly dissected terrain, etc., should be given. Mitigative and preventative measures should be presented in a Management Prescriptions' section sufficiently detailed to assist or give guidance to even the professional forester or the logging contractor. Also included in the Management Prescriptions should be detailed constraints and guidelines for SMU's.

One of the questions which often confronts the reviewer of a Forest Service DEIS is the disposition or impact of a harvest plan on long existing trails within the Unit. Often the trails either become logging road routes or are severely chopped up by clear cuts, and, except for deer and elk hunters for which this effect is ideally suited, the trails no longer afford the recreation value enjoyed by generations of backpackers. To many families using the "Unit" area for recreation, the greatest concern is not the disposition of the timber resource, for they recognize the harvest need, but rather the seemingly senseless destruction of a cherished antiquity. Trails are a significant part of our American heritage, passing thru the centuries from game trails to the routes of Indians, trappers, explorers, and prospectors. For the romanticist and our youth,



Craig S. Weaver
March 21, 1975

COMMENTS ON THE STATEMENT:

1. Page 10: The statement that geothermal development could have "profound effect upon any Land Use Alternative" seems to imply that the slight prospect of geothermal development would not have an equal weight in land use plans, but possibly be weighted much more heavily than some other use, such as wildlife or dispersed recreation. Is this the policy that the Gifford Pinchot is developing, or considering developing?
2. Inventoried Roadless and Undeveloped Areas; pages 13-15: The division of the roadless country north of Spirit Lake into several small subdivisions, one of which is the Upper Green Roadless Area, seems to badly bias the outcome of the Quality Index. By treating anything in small enough quarters, it is easy to overlook features of the larger unit. Had the Upper Green area been attached, as it should be, to the Mount Margaret Roadless Area, it would serve as yet another type of camping and visual experience in the Mt. Margaret area.

The preservation of "The topographic configuration of much of the Clear Creek drainage gives an excellent feeling of isolation even though mans activity is nearby" seems especially desirable in light of the vast number of streams in the Gifford Pinchot which have been roaded and logged, and are today filled with logging traffic and dust, making hikes along these streams almost unbearable. I strongly question the statement that because of its long narrow shape, the Clear Creek drainage is undesirable for camping qualities. Actually, the presence of the long valley, unmolested, and affording "an excellent feeling of isolation" gives hikers an ideal starting hike along a very scenic stream before reaching the Boundary Trail and the associated high country.

The statement on page 15, concerning the Shark Rock area, "Because it is ... the very evident works of man surrounding the area on three sides" seems to imply that this removes the area for wilderness consideration. To clarify this, a statement needs to be added pointing out that this is not so. A good example of this is the Mt. Adams Wilderness, where almost every point so classified as wilderness overlooks the same very evident works of man.

Throughout the discussion on these pages, it is constantly implied that the areas hold nothing unusual or unique. Actually, it would seem that unroaded forest lands are an unique asset and resource in Southwestern Washington and Northwestern Oregon, since currently no low elevation forest below about 5000 feet is protected in the Gifford Pinchot or Mt. Hood National Forests.

No mention is made in this section of the fact that unroaded, wilderness lands have an important intrinsic value, and that this value may far overshadow the commodity production on the same land.

FOREST SERVICE
Gifford Pinchot National Forest
VANCOUVER, WA

APR 15 1975

RECEIVED

Craig S. Weaver
6247 NE Radford Drive
Seattle, Washington 98115

April 10, 1975

Spencer T. Moore
Forest Supervisor
Gifford Pinchot National Forest
500 West 12th Street
Vancouver, Washington 98660

Dear Supervisor Moore:

Enclosed are my comments concerning the Draft Environmental Impact Statement for the Clear Creek Planning Unit. These comments are broken into two basic areas: 1) comments on various points in the statement, and 2) suggestions for modification of the chosen alternative. Where appropriate I have given page numbers or quoted part of the sentence that I felt was unclear or needed further clarification.

The only major modification that I would strongly urge is the addition of the current area of the Clear Creek Roadless Area above the juncture between Elk Creek and Clear Creek to the Shark Rock Scenic Area. Such an addition would preserve several examples of lower elevation forest and streamside areas, while at the same time providing substantially better buffering of the proposed trail along Clear Creek. Such an addition would extend the scenic definition to an area that is not adequately protected in the Gifford Pinchot National Forest, namely lowland forests. Ultimately, the upper Clear Creek area, along with contiguous wildlands should be selected for wilderness study, since barring unforeseen disasters, no modification of the landscape is immediately planned in the Shark Rock Scenic Area. With this addition, plus several smaller changes attached below, I can endorse, although reluctantly, the amended Alternative.

I am sorry that this response is late in reaching your office. I hope that some points raised may be of some use in your revision process. I would like to receive the final environmental impact statement on this planning unit.

Sincerely,

Craig S. Weaver

Craig S. Weaver

Craig S. Weaver
March 21, 1975

6. Timber, pg. 37; The statement "... in a dispersed recreation area it may be desirable to remove enough trees to provide a scenic view" seems to ignore the fact that many people find trees highly scenic. Furthermore, while the statement that every attempt will be made to involve the public sounds fine in theory, how can the public be sure that no additional "Miners Creek deals" will not take place?
7. Favorable Environmental Impact, Fire, page 45; On page 12, the following statement is made, "Records indicate that the number of fires has increased somewhat over the last five years, as the area has been made more accessible to people through road construction". On page 45, and repeated by referral on pages 71, 80 and 94, the following statement is made: "Fewer fires should occur than under Alternative 2 since fewer people would be expected to use the Planning Unit". However, examining the amount of roads to be constructed would appear to be the criteria you are using to relate fire incidents to public use. Since according to the summary, Table 5, approximately 100 miles of road are to be constructed under Alternatives 1, 3, 4, and 5, as compared with only 50 miles of road under Alternative 2, the conclusion stated on page 45, in regard to the criteria on page 12 is wrong.
9. Where is data available on the environmental impact of herbicide spraying projects? How is the public informed when such an operation is authorized and is stream contamination a serious problem (page 52).
10. pg. 64; If the Shark Rock area were to be designated as a part of the Wilderness System, then arbitrary decisions regarding any commodity production must be made by Congress. The option of committing such lands to commodity production probably does not really exist. (Comment- This entire document repeatedly fails to recognize the recreational use of land as an end use of the land, but instead repeatedly tries to emphasize that the option of full commodity production for the land is always available in the future, pages 43, 64, 74, 83, 94, and Table 6, pg 101. It is precisely this attitude that forces citizens to seek statutory wilderness protection for wildlands in the National Forests, and illustrates why wilderness study is needed and necessary for the upper part of Clear Creek roadless area 308, above the junction of Clear and Elk Creeks, in addition to the following areas: Shark Rock, #309, Langille-McCoy Creek, #309, Upper Lewis, #310, and Juniper Peak, #311. Furthermore, the Upper Green Roadless Area needs to be added to the Mt. Margaret study area. The heavy and repeated emphasis on commodity production, coupled with an apparent strong desire to turn all growing trees into wood products puts a heavy bias all across this document.)

11. Page 66; The fire statement does not appear to be consistent with the initial statement made on page 12. Which is the greater danger for starting fires- more roads and better access or fewer roads and possibly more people. This question is not answered to my satisfaction.

12. Table No. 6, page 101; How can land classified as wilderness under the Wilderness Act properly be referred to as "an area on which option of commodity production is reserved" (under the heading of Social and Economic, Alternative 2).

Craig S. Weaver
March 21, 1975

3. Recreation; pages 15-16; The statement goes to great length to discuss the Social and Economic factors in the region, however no similar discussion is found on the large scale recreation picture. It seems necessary to add the comment that additional backcountry and wilderness lands are vitally needed in this area, particularly in light of the fact that the backcountry is consistently "full" at nearby Mt. Rainier National Park throughout the summer months. Since the roadless areas in this planning unit are contiguous to major blocks of roadless lands, it seems necessary to make mention of this fact. Again, mention should also be made of the relatively few wild lands available in the Mt. Hood National Forest.
4. Land Ownership and Status; pages 32-33; I object to the Forest Service reversing its position on the removal of the power withdrawal, without at least a mention somewhere in the statement about the possibility of studying the Lewis and Muddy Rivers for inclusion in the National Wild and Scenic River System. The idea that a two hundred foot dam, with limited power generation capacity, will contribute significantly to long term energy policy does not seem realistic; but since the proposal for hydro withdrawal is being kept alive I would favor including the specifics of the project- how much power generated, projected and current demands- so that the public can better understand the type of tradeoff between free-flowing rivers and power generation (and profit) the Forest Service is recommending retaining.
5. Recreation; pages 33-35; The corridor, connecting the two roadless recreation areas, referred to as "averages about 600 feet in width" does not seem adequate to guarantee the integrity of the trail along Clear Creek. Indeed, the boundaries seem so drawn to insure that virtually every harvestable tree is cut down. To correct this, and also to keep the trail along upper Clear Creek more free of logging truck and chainsaw noise, I urge that the boundaries of the Clear Creek Roadless area from the junction of Elk Creek with Clear Creek to the boundary of the proposed Shark Rock Scenic Area be maintained and added to the Shark Rock Scenic Area. The Gifford Pinchot National Forest seems to read into the definition of scenic the restriction that old-growth timber is not included. Including the upper reaches of Clear Creek in the Shark Rock area would compliment the high country around Shark Rock, and provide more adequate buffering of the trail proposed along Clear Creek.

Question: When is proposed trail construction likely to begin?

Motorized use should be prohibited on all trails in the Gifford Pinchot. Since the entire forest is so well loaded with roads, it seems redundant to allow machines on those few trails that have not been obliterated by either road building or logging operations.

I fail to see how the management plan for the rest of the planning unit allows for cross-country hiking, unless dodging automobiles and trucks and weaving through clearcuts so qualify. Your statement on pg. 35 would be better worded "short hikes", rather than cross-country hikes.

Craig S. Weaver
March 21, 1975

SUGGESTIONS FOR MODIFICATION OF THE CHOSEN ALTERNATIVE

1. Retain the current boundary of the Clear Creek Roadless Area from the junction of Elk Creek and Clear Creek to the boundary shown for the Shark Rook Soenic Area as an extension of the Shark Rook Soenic Area. This is highly desirable, since it would preserve some lower elevation forest and stream areas in their natural state, and at the same time more adequately buffer the proposed trail along Clear Creek. This upper part of the Clear Creek Roadless Area, along with adjacent wildlands contained in the Shark Rook, McCoy-Langille Peak, Upper Lewis, and Juniper Peak should be selected for wilderness study.
2. The Upper Green River Roadless Area should be added to the Mount Margaret Wilderness Study Area. All entry into this area, as proposed under Alternative 1 for emergency harvest, must be strongly opposed. Public feeling for the greater Mt. St. Helens area is obviously very high, as the recent uproar over Miners Creek has made plainly evident. The Upper Green River area is seen by many people to be an integral part of the wilderness north of Mt. St. Helens, and as such must be preserved.
3. Roadless area protection should be extended from Trail 30 on Spencer Butte down to road N920. This area is covered with scrub timber and can only marginally affect timber outputs.
4. Roadless area protection is needed for the narrow Lewis River corridor, as proposed under Alternative 3. Given the rather severe harvest limitations in this corridor, little affect on timber output would result.
5. The Lewis River and Muddy River should be selected for study under the Wild and Scenic Rivers Act.
6. Motorized use on all trails is strongly opposed and should be discontinued. On a priority basis, trails #1, 30, 31, and the proposed trail up Clear Creek should be closed to all motorized vehicles.
7. Any roads no longer needed for timber harvest should be closed and allowed to revert to their natural state.



U. S. DEPARTMENT OF AGRICULTURE

FOREST SERVICE
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VANCOUVER, WASHINGTON 98660
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